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MENTAL SYMPTOMS OF CEREBRAL SYPHILIS.*

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Syphilis may be the cause, either immediate or remote, of every form of disease of the nervous system, from neurasthenic conditions to coarse brain disease, or insanity. The reference to cases that follow will relate chiefly to conditions of mental disorder.

Insanity due to syphilis has, in many cases, characteristics which though not easy to describe, are indicative of a specific origin. There is however a small proportion of syphilitic insanity that is represented by the usual forms of mental disorder. It is quite correct to say, therefore, that syphilitic insanity may mimic every known form of mental derangement, simulating acute mania, ordinary melancholia, terminal dementia or resembling so closely paretic dementia that experts may differ in their diagnosis.

There is nothing characteristic in the mania of syphilis while the maniacal stage lasts, and the same statement applies to forms of depression due to syphilis. The history of the entire course of the attack is, however, often suggestive of a specific origin. The mania of syphilis is, in my experience, apt to be of rather brief duration and followed by mental confusion or mental weakness with intervals of quiet and semi-lucidity, showing the usual irregularity of syphilitic brain affections. The same is true of syphilitic melancholia, as there is the same irregularity, brief depression with much confusion, outbursts of excitement, periods of stupor and early dementia.

While, therefore, these forms of syphilitic mental disorder may for a brief time be quite like ordinary forms of insanity, there are few cases that will, if their entire history be considered, fail to present the irregular features mentioned, and which may often be regarded as circumstantial evidence of a specific origin.

In the majority of the cases of brain syphilis the mental symptoms are largely negative. There is a loss of mental power; of self control; of the self-regarding virtues; of moral sense, and a general lowering of the individual mentality. The memory is much impaired, only the simplest kind of reasoning is possible; the emotions are imperfectly controlled; there is a state of dullness and indifference, occasionally broken by an outburst of causeless anger, or a fit of crying, or an hour of depression with a quick return to the prevailing state of mental apathy; these are prominent characteristics of the more common form of cerebral syphilis in which mental symptoms are conspicuous. That the early symptoms of cerebral syphilis are often irregular and obscure the following case illustrates:

A groceryman, age 32, had a primary sore at 22. Five years later developed what he calls "blind spells," which still recur. Once or twice each month, usually while working hard, he suddenly becomes blind and a little confused. He sits down for a few moments when the attack passes off, and he resumes work. In January last he became confused during the afternoon and spent the greater part of the night wandering in the streets. For a month he continued to work; he recognized people readily, but could not call their names nor add a column of three figures; would give the wrong price to customers on common articles, enter still another price on the books or forget to make the entry; would ask the same question and give the same order several times. Every evening, for two months after this, he had attacks lasting ten minutes, during which he would stare wildly and talk more or less incoherently about becoming insane. These attacks ceased and he has steadily gained. He now attends to business, but is easily tired and confused and says that he lacks his former self-confidence.

The following two cases illustrate this form of syphilitic mental disorder, the form shown in mental weakness with quickly changing and incongruous delusions, with loss of memory and interests and more or less confusion of mind.

A man who had a primary sore and secondary syphilis at 31 came under my care when he was 41 for mild mental disorder that was clearly due to syphilis. His mental breakdown was probably hastened by occasional brief periods of drinking, a habit that is frequently a contributory cause of an irruption of brain symptoms in the specifically infected. He was in a state of quiet confusion, mistaking the identity of people, recognizing old friends in the physicians and attendants, who were strangers to him. He would say to-day he was in Europe, traveling for his health; to-morrow that he had been kidnaped by bandits, the next day that he was in prison for crimes he had committed, or in his own home, and yet he was quiet and contented, showing none of the interest of a traveler, the concern of a criminal in his fate, nor the anxiety of one who had been kidnapped. There was occasionally an hour when he was much depressed; at other times he would have brief periods of mental clearness, though the prevailing state was that of confusion and mental weakness, with occasional and rather indifferent reference to his delusions. During a period of six months he gradually improved and has now been entirely well for nine years.

This is the longest interval of health I have known to occur in such a case, and from my observation recoveries for such a period of time as nine years are rare. It is worth remarking here on a peculiarity of the insane syphilitic, which is the detachment of his life from his delusions. There is frequently, if not generally, an incongruity between the conduct of an insane person and his pretensions, yet this is so marked in the syphilitic insane as to have a diagnostic significance. Though the paretic does not see the inharmony between his grand schemes and his poverty and helplessness, he at least shows some earnestness and enthusiasm. The paranoiac is intense and vehement, and chafes under the indifference of his friends or the restraints of an asylum, and even the chronic delusional insane person takes pride in his fancies and sincerely believes in them.

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The syphilitic insane person of the type we are now considering has a different attitude toward his delusions. He will speak of them day after day, rarely repeating in any two successive days the same delusions and may even have no recollection to-day of those he spoke of yesterday with great detail. The chief peculiarity, however, is that he seems to have little interest in his delusions; he speaks of them without feeling, interest, or enthusiasm; they do not excite his resentment for fancied wrongs; he speaks of supposed injuries done him as though he were a third person, and repeats his delusions with the mechanical and indifferent manner of one who is reciting something from memory.

This quiet monotonous reeling off of incongruous fancies that seem to correspond to no desire, that awaken no interest, that lead to no plans, nor take shape in action, that seem to come and go like the confused and hurried impressions of a dream, are distinguishing features of this form of syphilitic insanity. The break between the thinking process and the actualizing and realizing impulses must be serious, and of a kind that is special to this condition. There must be special lines of pathologic progress, undoing with the strict orderliness of growth the complications of cerebral structure, and which is shown in the confusion of the habitual thought processes, in the peculiar dissociations of reason.

Another case of this quiet, confusional form of syphilitic insanity was that of a woman whom I treated for two years, and who had been infected by her husband. Two years after infection she showed signs of mental failure, which at first was mild depression, but in a few months passed into a condition of weak-mindedness and indifference to her surroundings. During the eight years she has now been insane there has been little change in her mental condition. She is quiet, dull and apathetic, having no interest in what is going on; indeed much of the time apparently unconscious of her surroundings, being inactive and inert mentally and physically. At times she has several hours or a day of partial sanity; she will ask anxiously for her husband and children, and speak of her home and friends. Gradually her mind relapses into the habitual state, or this may take place after a day of melancholic depression. During her dull periods her speech is mumbling and indistinct; words are omitted or recalled with effort and proper names hardly at all. During the brighter periods she speaks naturally and correctly,

This quiet, apathetic, mildly varying condition, with long periods of confusion and dulness, occasional and sudden return of apparent sanity with depression or short attacks of hysteria and return to habitual mental state, furnishes an epitome of the mental symptoms of a very common type of syphilitic insanity.

Insanity may occur in the syphilitic very soon after the appearance of secondary symptoms. One has been reported in which a man became insane with characteristic mental symptoms within three months after infection. I knew a case to develop within six months. A business man under my care showed some moral perversion, extravagance, inability to apply mind, loss of interest in family and business, with decided loss of mental vigor and brief periods of depression, within six months after contracting syphilis. A few weeks later he became very stupid, had to be dressed, and at times fed. Under treatment he made a fair recovery and resumed business for some months, when without any apparent mental failure, he became shamelessly immoral, abandoned his family, and finally disappeared. Cases of this kind have more interest for the general practitioner than some of the more severe and commoner forms of syphilitic insanity because such cases may not be committed to an asylum, but remain at large to cause the family and friends and the physician much annoyance.

The prospects of ultimate freedom from return of the disease are poor, and we should expect this to be so, for so highly organized a tissue having been injured by structural change, a tissue in which complete repair never takes place, it is hardly probable, indeed it is rarely possible, in the declining vigor of later life or in the strain of work in active life, that one should escape a return of the disease.

It is important that we appreciate the normal resistances of the body and know their limits as nearly as we can. A decayed tooth may set up a neuralgia that may continue as a habit after the removal of the tooth, because the resistances of the nerve center once weakened fail to regain the normal vigor. The doctor who has had much to do with those who have broken down from so-called overwork, that is, the worries, the anxieties, the excitements, disappointments, dissipations, irregularities of life, knows that these people rarely regain the vigor they once had and he knows, too, how difficult it is to keep them from relapsing into the morbid state. Heart-strain, neuralgias, headaches, affections of the stomach, neurasthenia, show the truth of this statement; that is, the peril of once breaking down the resistance of any part of the body. Half our work as physicians is in treating diseases that are the result of some part having been weakened from ill use and which ever after is an invalid organ, drawing a heavy pension from the system for its disability. It is true of syphilis in a special sense that it devitalizes the system, producing a vitiated tissue life that easily takes on disease and when it has once attacked the brain and thus made a positive break in its structure, it is pretty certain to return. The repairing power of the brain tissue proper is most imperfect, only functional diseases that testify to molecular change are ever repaired, so quickly does the brain take on abnormal habits and so easily does it drop to a lower level of function. The injuries done to nervous structure from syphilis are, too, not only unrepairable, but they are from their very nature, when they contain the specific poison, infection foci that multiply by many figures the chances of further disease.

It is one of the characteristics of syphilitic disease that its pathologic changes are in many if not most cases diffuse, variable and irregular, and the symptoms of syphilitic mental disorder correspond to this law, if it may be called a law. The same individual may present manifestations of wild excitement, melancholic depression and mental apathy and even stupor within a few weeks.

A man of 34, under my care suffering from syphilitic insanity, was usually quiet and slightly confused, and at such times expressed no clearly defined delusions. About once or twice a month he would be excited for three or four days, would keep walking rapidly from morning till night, preferring to walk in a circle on the lawn and carry an umbrella even on cloudy days. Said he was the Duke of Argyle, and that Queen Victoria had declared him her special favorite. He wrote letters to the queen, calling her his dearest love, and yet would make a proposal of marriage to one of his female servants if opportunity offered. He boasted of his intellectual capacity and physical prowess and was dictatorial and offensive in language. Later he would sud-

denly become very dull, denying his delusions and be for days too stupid to care for himself. He became very weak-minded, and finally died of hemiplegia, due to thrombosis. This was probably a case of arterial disease with starvation of the brain and slow degradation of its essential structure.

Another form of syphilitic insanity is one in which the patient is at first irritable, suspicious, and develops delusions of personal injury or persecution. He may believe others are trying to poison him or ruin his business and kidnap his family, and yet, as has been stated, there is decided mental apathy, a lack of any spirit of resentment or any thought of attempt at self-protection. Later the patient ceases to speak of his delusions, becomes weak-minded and contented and occupies himself with trivialities and simple routine work. A case of this kind was under my care for two years, and while very much enfeebled mentally, was taken home where, during an hour of depression, he drowned himself. Other cases will reverse the order of symptoms and show the quiet, easy-going demeanor of this man for some days or weeks and then suddenly become irritable and suspicious, and give expression to many delusions. Shortly there succeeds a mental dulness almost amounting to stupor and which continues for several days, from which the patient may temporarily pass into a condition of partial lucidity lasting only a few hours or a day before the return of the habitual mental state. Such cases illustrate and emphasize the statement that the symptoms of brain syphilis are variable, irregular and unpredictable in any given case. A young man of 30 who had contracted syphilis at 20 showed some mental depression and loss of memory and was taken to the hot springs. Soon after going there he became mildly melancholic. He was greatly emaciated, a very common thing in early syphilitic insanity, and at the same time showed mental confusion that was out of proportion to his depression; this being of itself suggestive of syphilitic origin. This condition continued for several weeks. He then gradually ceased to mention his ideas of sinfulness, etc., and showed symptoms of extreme dementia, was stupid and soiled himself, was fed by an attendant and for weeks was unable to walk from physical weakness and mental apathy. Afterward he came out of the state of stupor, became very irritable and suspicious, struck his attendants, broke window lights, and was rather difficult to manage. Later he was quieter and became subject to sudden attacks of extreme terror, during which he would attempt to escape from some fancied danger. After half a minute this would pass off, and he would feel dull and listless, and have no recollection of the occurrence. It was probably cerebral epilepsy. After eighteen months he was greatly improved, his mind was fairly clear though perceptibly weakened, was taken home, and in about two years died of an acute attack of brain disease.

It is a common observation that many inebriates become syphilitic, and it is often observed that the mildest degree of brain failure may lead and does lead to the drink habit, so early does the disease weaken the moral restraints. It is well known, too, that an old and latent syphilis is made active by drink, and I have found, too, that syphilitic inebriates are particularly liable to commit suicide after a drinking bout. So many people who have nervous syphilis are also inebriates that it is not easy to allot to each its etiologic value.

Other cases of syphilitic mental disorder may present mental symptoms of a systematized delusional type and continue without apparent change for years. Such cases, however, are pretty sure finally to show confusion and weak-mindedness and irregular and gross brain failure.

The relation of syphilis to paretic dementia has been much discussed, some claiming all paretic dementia is due to syphilis and others that it is only an occasional cause. Some forms of syphilitic insanity are certainly much like paretic dementia. I think that the cases that are strikingly alike are often due immediately to conditions that are alike. We know that paresis occurs in the prime of life, exceptionally in the developmental period, and that it is usually immediately due to stress, to overwork, business cares, worry and all those causes that test the endurance of men in active life over long periods. The syphilitic insanity that so closely resembles paresis usually develops under much the same circumstances, syphilis being a cause in the sense that it weakened or broke down the defenses of the system. In most cases of syphilitic insanity, there is less tendency to delusions of grandeur, more frequent paralysis of cranial nerves and, more frequently, attacks of gross brain disease leading to local softenings and focal symptoms. Recovery from syphilitic insanity apparently sometimes occurs, paretic dementia is probably never recovered from.

In addition to these types of purely mental disorder due to syphilis, there are others in which mental failure may be associated with evidences of gross brain disease and focal signs. A young man, aged 31, under my care, had ten years previously had primary syphilis, his only brother having died of syphilitic brain disease at his age. He spent money foolishly, neglected his business and indulged in immoralities. When I first saw him he was good-natured and jolly. He boasted of his travels and business ability, neither of which was extraordinary. He was somewhat confused and weak-minded, his speech being drawling, trembling and hesitating, with a dull expression and a senile tremor of his hands. One day he would be cheerful, active, interested in the news of the day, and talking agreeably and coherently, the next day he would be dull, slow of speech, and confused mentally. Later he had temporary attacks of paralysis of an arm or leg. Later in the disease he had an attack of hemiparesis with convulsions beginning in the hand of the paretic arm and extending in Jacksonian order to the entire side. With this there was a condition of quiet delirium in which he saw processions of gaudily dressed demons marching about the ceiling of his room, grinning at him and threatening and making gestures. The paralysis gradually became complete in four days, and passing into coma he died. There was no autopsy.

F. W. Mott relates the case of two brothers, both of whom had syphilitic insanity of the type of the case I have just recited, and in one an autopsy showed cortical arterial disease. My patient had also what is common in the syphilitic, a number of irregular and temporary attacks of aphasia. Charcot long ago called attention to this as being characteristic of syphilitic brain disease.

Though physicians may differ regarding the curability of general syphilis, few, I think, who have had much experience with syphilis of the nervous system, will hold that these cases are safe from a return of the disease. The man who has had brain syphilis in any form or degree, however well he may appear to be, is permanently crippled in the most vital part of his body, and he can only hope to avoid a return of the disease by a careful way of living that few men have the cour-

age to adopt and fewer still escape relapse by adopting. When indeed can we say that one has recovered from syphilis? The word recovered must be used here in a different sense from that which it bears when applied to other diseases. Here is a man of fine physique and great endurance who shoulders his way easily through resistances and is never sick and a stranger to tire. He has a primary sore and mild secondary symptoms. He is outwardly the same as before and may go on for years in perfect health, when after some unusual stress or irregular habits the syphilis may reappear and possibly prove quickly fatal. The virus may not remain long in the system, but it certainly modifies the tissues so that their resistance to stress, to disease and to all unfavorable conditions is much reduced.

The first case in the series here reported as having recovered nine years ago has recently developed epilepsy of an irregular type. This man denied having syphilis, but his brother, who knew of his having had it, furnished the information. Under rest, treatment and steady habits, patients improve astonishingly, but from lack of care of health, dissipation or overwork, years of health may end in a relapse. Sometimes symptoms, such as headache and insomnia may return, or cranial nerve paralysis may recur, or an entirely new group of symptoms develop, indicating new brain territory involved. A syphilitic hemiplegia may be recovered from, to recur later on the same side, or on the opposite side, or on both sides, and this be the result of a debauch, or of an illness, after an interval of years of good health.

A bad heredity will, of course, add to the dangers of brain disease in those who are once infected with syphilis, the heredity being an element in the disease to the extent that it furnished a nervous system whose resistive powers were weak. The nutritional habits of such a system, though normal to it, are yet next of kin to the pathological and it is not surprising that it should have a fatal affinity for the specific virus. Many men are made of crumbly material, but if they escape stress and the incidence of special poisons, they may slip through life unscarred, but let adversity test the quality of their endurance or poisons like tuberculosis or syphilis attack their weakly organized tissues and the results are quickly serious. In some cases where the brain is involved this may be due to the complexity and instability of this highly organized tissue, which makes it an easy victim for a poison. I have seen such a large proportion of brain syphilis among intelligent people that I have come to believe that, other things being equal, the intellectual man who has contracted syphilis is more liable to have his brain attacked by it than another man who may also have had syphilis, but whose mental capacity is of a lower order.

This is apparently contradicted by what I believe to be the fact that intellectual or intelligent people are less liable to insanity than those who are ignorant or of inferior capacity, for of the vast multitude of those who annually go to our insane asylums, only a fraction are really intelligent people, a fraction much less in proportion than the relative numbers in the general population. It is essentially true, I think, with certain qualifications, that insanity is a disease of ignorance and incapacity. It represents the failures in the life-adjustments which to the intelligent are simple and easy; the cultured and intellectual are protected against insanity because of their more correct view of life, because of their variety of mental occupation, which allows them to escape that which more than any other one thing determines insanity, namely, monotony of life and unrelieved and unvarying mental strain, however rude the work may be or simple the strain.

I do not, however, believe that this law of the mental self-protection of intelligence holds in syphilis, because we have there the brain of both the dull man and that of the wise man exposed to the same poison; they are both prisoners in the same cell, with the chances in favor of the dull man, whose brain, being of a low order, is of a more primitive and stable type of structure, and therefore presents not only an older and tougher tissue to the poison, but it also presents fewer points for the poison to attack.

Though it is possible to distinguish between syphilis of the membranes, of the cerebral arteries, and of the brain tissue proper, from personal experience I should say it can only be approximately done. In cerebral arterial syphilis the symptoms are those of deprivation, the brain is starved. The gradual destruction of the brain functions proceeds unequally, however, not uniformly. The lumen of a vessel is finally closed and there is local spasm and paralysis if in a motor region, which may be early recovered from as collateral circulation is established. A few days later these collateral vessels also suffer and there is a return of the paralysis which lasts longer and is only incompletely recovered from, and then later the whole limb or the side becomes paralytic, when the vessels are permanently closed. This irregular recurrence of symptoms indicates the imperfect and haphazard blood-supply against which the starving and failing brain contends.

Coincident with this there are usually attacks of aphasia of a transient and irregular order, and due to the same condition of arterial failure. A number of times I have followed such cases from the beginning of cerebral failure through all the kaleidoscopic changes of the disease until the patients died paralytic and demented. In one case I noticed that when the patient took a long walk or played tennis he had transient spasm in the right leg and arm followed by temporary paralysis. If he talked any length of time he developed a temporary ataxic aphasia, showing what little reserve power was left to the brain as the blood-stream was gradually shut down.

Cerebral arterial syphilis may exist without meningitis, but syphilitic meningitis rarely exists without arteritis, perhaps never.

In meningeal syphilis there are local paralyses rather irregular in distribution, sensory phenomena, especially headaches and neuralgia, and cranial nerve palsies in basal meningitis. The mental symptoms are of an active kind, delirium, or even furious violence, though there may also be attacks of stupor.

The signs of gumma, though sometimes definite, depend upon their number, size and location. In a general way, it may be stated they are those of a tumor if the gumma is local.

Those familiar with nervous syphilis know how promptly specific treatment may relieve conditions that in cases other than syphilitic would be hopeless. The relief is not, however, wholly due to the specific nature of the disease, but partly to the tissue involved. F. W. Mott's investigations show what syphilitic degeneracy is in the mesoblastic tissues, the membranes, blood-vessels and lymphatics, and that the neurons are involved indirectly. If the nerve cells were directly attacked by the virus they could not be repaired, being, as they are, perpetual elements, and we would not observe those cases of quick relief of serious symptoms, as we so often do

in cerebral syphilis. The disease of the membrane and vessels is, however, reparable within certain limits and the neurons may be restored to function when the pathological conditions of these parts are removed. The symptoms of cerebral syphilis may be due to various morbid processes, in one case to arterial occlusion, in another to pathologic lymph which fills the pericellular spaces and arrests or perverts the function of the neurons, in others to rapidly developed and perhaps temporary internal hydrocephalus due to stoppage of foramen of Majendie by inflammatory adhesions, according to Mott. The temporary attacks of drowsiness and stupor in cerebral syphilis are probably sometimes due to this condition. In cerebral syphilis, and also in paretic dementia, there is probably always some autointoxication from pathological conditions of blood and cerebrospinal fluid. When the myelin sheaths undergo degeneration cholin is formed, and this being a poisonous substance, is another element in the widening circle of disease.

That some people have severe general syphilis, while the nervous system escapes, and others have mild general syphilis and malignant syphilis of the nervous system, is a well-known fact. Hitzig claims that there are several toxins in syphilitic infection, and it is possible that they may have special affinities for special structures and that the activity of one and another varies in different infections. Some strains of syphilis may be more potent than others, some people are probably more susceptible than others. A French author has reported the case of a woman who infected five youths with syphilis, three of whom died of general paresis and the other two of brain syphilis. In such a case it is more probable that there was a special malignancy in the virus than that the five men were specially susceptible to syphilitic degeneracy of the nervous system.

There is no morbid condition in which it is so important to its proper understanding that its entire natural history be studied as that of insanity, and this study should include its developmental period, during which the morbid mental habits were forming and the morbid condition organizing. In this way, and only in this way, will we learn the order of progress from the beginning. This is necessary, too, not only that we may understand the disorder as a whole, but more than anything else, it promises that by thus tracking insanity to its source we may be able to achieve something in the way of its prevention. In this connection all conditions showing analogy to insanity help to explain its nature, such as conditions of mental defect, drunkenness, somnambulism and the phenomena of brain dissolution in old age.

The quiet forms of syphilitic insanity have in their symptomatology much in common with the mental history of the senile and, indeed, it may be said of all forms of insanity that they represent in some respects a premature and irregular senility. In senility we witness the slow undoing of the brain structure, which during life has been gaining in complexity, in accuracy of balance and adjustment, in multiplicity of relation, and which in senile degeneration of the brain is undone from the top, leaving the individual with the capacity of the child and with the instincts of the primitive man. The resemblance is more striking between senile mental changes and those of paretic dementia and syphilitic insanity than in other forms of mental disorder, possibly because of the more deliberate and systematic development of these special insanities. In these forms of insanity the higher faculties are easily seen to fail first, and they fail first because the delicately organized tissue of which they are the function is the last evolved and most unstable part of the brain, and therefore easiest and first involved in the degenerative process. In all cases of slow developing insanity the higher faculties are the first to go. The judicial mind fails in the summary of knowledge and in comprehensiveness of grasp, the musician loses the ability to interpret the higher conceptions of the master, the business man fails in quickness of perception and in those accuracies of judgment that divide success from failure, and all of these repeat in a general way the order of the unmaking of the brain in senility; that is, nature unravels from the last stitch that living fabric into which the generations of men have woven their experiences.

DISCUSSION.

DR. DANIEL R. BROWER, Chicago—I am glad that I heard the masterful paper of Dr. McBride. I can add my testimony to his, that in the differentiation of these cases, the peculiarity of the mentality and the bizarre character of the symptoms are invaluable aids; and, again, the condition of arterial nutrition is most important. Pre-senility of the arteries, in the absence of interstitial nephritis, tuberculosis and gout, point almost unerringly to syphilis. I am also fully in accord with the paper in prognosis.

DR. H. A. TOMLINSON, St. Peter, Minn.—In these cases degenerative change takes place early in the anterior portion of the brain. In the course of this degenerative change the anterior branches of the Sylvian artery and the anterior cerebrals are the first to show marked evidence of atheroma, and the white streaking of the pia along the line of the blood-vessels appears earlier here than elsewhere. The location of these early changes explains the manifestations of mental disturbance in brain syphilis; because from these vessels comes the blood-supply to the area anterior to the precentral fissure. We all know that there are a large number of cases of syphilitic brain disease in which there is no mental disturbance whatever, and that the only evidence of nervous disease is some form of paralysis or aberrant manifestation of motor disturbance. In fact only a very small portion of those infected with syphilis become insane or suffer from nervous disease. The victims of syphilitic brain disease who become insane, so far as my limited experience goes—for we do not see much syphilis in the hospitals for the insane in Minnesota—are almost invariably the children of the tuberculous, syphilitic, or alcoholic; in other words, they are born with a limited vital potentiality, and it shows itself in the tendency of all disease changes to take the form of connective-tissue increase. For that reason there is naturally a more rapid and complete development of atheroma. This structural defect would indicate why these people are affected with degenerative changes, while those without this hereditary tendency have only the ordinary manifestation of syphilitic disease. I also want to speak of the difference in the manifestations of mental disturbance in the so-called second and third stages. I believe that early involvement of the brain in the unstable and defective after syphilitic infection is more common than is generally thought; especially when the involvement of the nervous system apparently takes the place of the ordinary external manifestations of the disease. I have had two cases in my own experience, in which I had positive evidence of the infection; both were young women married to men who had been recently infected with syphilis, by their own admission. In one case the insanity appeared in the second and in the other the third month after infection, and in neither one of them were there any of the external manifestations excepting a little sore throat. In both the mental disturbance began just as described by Dr. McBride, and passed rapidly into maniacal excitement with grandiose ideas. In those cases in which the affection comes on later, when degenerative changes in the blood-vessels are obvious, the manifestations would necessarily be those of progressive mental reduction, with confusion and cyclical outbursts of excitement. In the two cases referred to, the excitement passed into de-

lirium and both died. Post-mortem the conditions found were characteristic of delirium; but at the base of the brain, in the anterior ascending arm of the Sylvian fissure and the lateral and third ventricles, especially about the velum and choroid plexuses, there was some thickening and exudation. There were also white streaks along the vessels of the pia over the frontal lobes. In another case, a young woman, a prostitute, was admitted to the hospital in a moribund condition. There was at the base of the brain, extending from and involving the optic commissure, on each side, a series of disc-like tumors from 1 to 4 cm. in diameter, apparently starting from the pia and destroying the cortical substance of the knee and foot of the first and second frontal convolutions and the olfactory lobe. The pia was very dense and thick. The white matter of the anterior portion of the frontal lobes was gelatinous. This girl had a history of having been insane for about seven months, and had been delirious for two days before admission. In this case the velum and choroid plexuses were also involved.

DR. H. H. LEVY, Richmond, Va.—I would like to ask those whose experience is greater than mine, whether they have observed as a precursor, or as an early symptom, of brain syphilis, a terrific pain in the middle line of the cranium, on and about the sagittal suture. In two cases which I have seen, it was an initial symptom.

DR. G. W. MCCASKEY, Fort Wayne, Ind.—I wish to emphasize the importance of the group of cases of insanity developing very early in the course of syphilis. When syphilitic insanity is spoken of, I think we generally have in mind those connected with the tertiary stage. I recently saw a case in a young attorney of 25, who contracted syphilis, and about a month later developed an acute psychosis. Death resulted, and post-mortem examination was absolutely negative. There had been temporary aphasia, such as frequently occurs as a brain symptom of syphilis. The syphilitic toxin may be fairly suspected of having produced such nutritional changes in the central nervous system as led to the insanity. However, it should be stated that the patient was a neurasthenic, and had been subjected to severe mental strain.

DR. T. D. CROTHERS, Hartford, Conn.—In my studies of the etiology of alcohol and opium cases I am continually surprised to find how often these diseases follow the infection of syphilis. Within a few weeks and in some instances months after the infection of syphilis the alcoholic craze appears. If the brain is particularly sensitive to alcohol and suffers from delirious states opium will be used and alcohol abandoned. I think I may say that from 8 to 10 cent. of the alcohol and opium cases can be traced to syphilis. Many of these persons may have been moderate users of alcohol before the infection. Others have been temperate and abstainers. It is clear to me that the poison of syphilis in many cases concentrates on certain brain centers producing irritation and exhaustion, for which alcohol and opium are most grateful narcotics. In a study of these cases it would be well to remember that the alcoholic and opium addictions are symptomatic of the degeneration of the nerve centers. This fact suggests therapeutic measures which are often very effectual.

DR. W. G. SPILLER, Philadelphia—I should like to ask Dr. Tomlinson whether he makes a distinction between secondary and tertiary syphilis in regard to the nervous system. It is the view of many neuro-pathologists that involvement of the nervous system may occur almost any time after the primary infection—a few months or many years—and that the distinction of early and late lesions can not be made in regard to the nervous system.

DR. HUGH T. PATRICK, Chicago—I should like to say a word apropos of what Dr. Spiller has just said. The sooner we abandon the old distinction between secondary and tertiary syphilis, especially in the nervous system, the better it will be. Aside from the insanity and the delirium which come with the secondaries, and which are to be classed, I believe, as disturbances due to infection, just like the disturbances of any other infection, there should be no distinction whatever made between secondary and tertiary changes in the diseases of the nervous system. The element of time should not be considered. I have seen in three or four months organic changes which could not be distinguished from those occurring four or five years after infection. I should like to emphasize the fact that these so-called tertiary symptoms occur as a rule within the first few years after infection, and that a period of quiescence of ten years after the first infection practically excludes brain syphilis. Brain syphilis occurring ten years after infection, that ten years having been a period of quiescence, is exceedingly rare.

DR. J. H. MCBRIDE, closing—I suppose it is essentially true that syphilis of the brain, occurring after 10 years, is rare, although I have seen cases occurring much later. Fournier mentions a case of a patient entirely well for 17 years, who then died from cerebral syphilis. Jonathan Hutchinson, Jr., has reported a case where the patient remained well for 32 years, and then died of syphilis. I have had several cases that remained well for 10 years and then were fatally affected. As to the circulation, I suppose Dr. Brower is correct. Dr. George Oliver has shown that in cases of syphilis, even soon after infection, the normal variation of the arteries on standing and reclining does not take place. I think Dr. Mott has said that syphilis never strikes without warning, and it is important that these cases should be dealt with by one who understands these warnings. On my way East I was consulted by a man who had what he called "blind spells," probably cerebral epilepsy, and who recently had an attack of confusion lasting several weeks, evidently incipient cerebral syphilis. He had been told he was bilious.

A REPORT OF SEVEN OPERATIONS FOR BRAIN TUMORS AND CYSTS.*

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The early wave of enthusiasm which followed the brilliant successes of Macewen, Godley, Horsley and Keen has been gradually displaced by an amount of pessimism which is unwarranted by the cumulative results of brain surgery for tumors and cysts. The pendulum has swung too far to the side of non-interference. This has been the direct result of numerous unwarranted operations in cases of suspected brain tumor, or in cases where the tumor was not accurately located. I feel safe in saying that hundreds of such cases, at a very low estimate, have been operated upon, which will never be spread on the annals of surgery or neurology. These are the cases which have done great damage and have been the cause of the pessimism which prevails, not only among the profession at large, but what is far worse, among the laity, who are only too apt to remember the failures and forget the successes, especially if the former outnumber the latter.

It is true that the enthusiastic hopes and predictions of the early enthusiasts have not been verified, but the fact remains that the fields for brain surgery for tumors and cysts, although very much narrowed, is still a considerable one, and one in which relief can be given and much good done. Pessimism always leads to inactivity and nihilism. Many a life could be prolonged, made more comfortable, and even saved, if the general practitioner and the general public once more felt the confidence born of successful results obtained in well-selected cases. Even in the latter, the mortality will always be great on account of the unwillingness of patients to be operated upon in the early stages. But, if we consider that with the extremely rare exceptions all cases of brain tumor are fatal, even the large mortality will not deter us from, not only advising, but urging operations. It would seem too much to hope that the history of

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cancer operations might be repeated in brain surgery, but the principle is the same, and the success might be equally brilliant if, as in cancers, operations are done early on well-selected cases. In this way we may hope that the confidence of the general practitioner and of the public will be restored.

CASE 1.—Mr. L., aged 32, was admitted to the Cincinnati Hospital, June 22, 1893. His family history was negative; he denied syphilis and gonorrhea, and had never been sick before. He stated that his trouble began three years ago with cramps in the left foot and arm; which came on at intervals of a few months. About six months before his admission they became more frequent. The convulsions invariably began in the left foot, extending up the left leg, arm and face and then became general, and after lasting a few minutes, were followed by unconsciousness and somnolence. He had violent headaches and frequent attacks of vertigo, but had never vomited. His mental condition had deteriorated somewhat, and he had become apathetic.

The examination was entirely negative; the left papilla was somewhat injected and the margins were indistinct. There was no weakness of the left side of the body, or of the left extremities, and no loss of sensation.

On June 24, the patient had another typical convulsion, as described above, which was followed by a well-marked weakness of the left arm and leg, with increased tendon reflexes, but no disturbance of sensation. The trouble was now diagnosed as tumor in the right foot center. On June 28, 1893, Dr. Ransohoff trephined over right foot center, and extended opening over superior right parietal lobe. There was no bulging of the dura mater, but when it was opened the tumor was found in the region of right foot center extending over into the parietal lobe. It was the size of a hen's egg; its cavity clean, and it seemed to spring from the pia mater. The tumor was shelled out with but little difficulty; the wound healed by first intention, but there was a boggy, protruding condition of the skin and subcutaneous tissue.

On awakening from the anesthetic there was found a total paralysis of the left arm, and the patient was not able to make even slight movement of the fingers. He had recurrence of his epileptic attacks once, a few days after the operation. With this exception the recovery was uninterrupted—no fever at any time. In a few weeks he was able to get up, and in six weeks left the hospital. There remained, however, a slight paresis of the left arm and leg, with slight spastic rigidity.

Seven years after the operation the patient is still alive; there has never been any recurrence of the tumor; the hemiparesis has, however, increased; his mental condition is good, though he has occasional epileptic seizures of the Jacksonian type. In this case the operation saved the life of the patient; relieved his head symptoms and diminished very markedly the number of epileptic seizures, although it failed to completely cure him.

CASE 2.—T. B., aged 18, occupation coal miner, was admitted to Cincinnati Hospital July 15, 1893. His family history was negative; there was no history of tuberculosis, phthisis, or syphilis. According to his father, the trouble began in the latter part of December, 1892, when the patient fell and is supposed to have struck the back of his head. Close questioning revealed the fact that headache, dizziness and nausea existed for some time before the fall, which was probably the result of the vertigo. Afterward these symptoms increased, with the exception of the vomiting, which the patient had only occasionally. After the fall a growth existed on the back of the head which at first was the size of a pea, but gradually increased until it became the size of an English walnut. About January 1 the vision began to be impaired; this defect increased until the patient could distinguish only between shadow and light. Close examination revealed the fact that the early trouble with the sight was a gradual loss of the vision on the left side of the nose; left hemianopsia preceded the total loss of vision.

Physical examination showed that the patient's mental condition was apathetic, but otherwise normal; well-marked choked discs which were passing into an atrophic state; total blindness; pupils equal in size; no light reaction; fading choked disc. In the left occipital region about an inch above and an inch to the left there was an elastic tumor which was about the size of an English walnut. It protruded through the calvarium, the opening being somewhat larger than a silver dime. The margins were sharp and elevated. The tumor had a semisolid elastic consistency, and could be pushed back into the cranial cavity, almost completely. This, however, increased the headache and vertigo, and caused nausea. There were no other physical signs whatever.

A semilunar flap was made directly over the tumor. This exposed at once a pulsating mass protruding through an opening in the calvarium, and pushing before it the dura mater, which formed a sort of sac. An incision was made through the dura mater, which was followed by the escape of a large quantity of fluid. It was removed, and although the tumor itself was not so large—size of a German walnut—an opening or cavity was present in the occipital lobe, almost oval in shape, about three inches long and two inches wide. The limiting membrane was very soft and jelly-like. The cavity seemed to be very clean; the shreds of pia mater were snipped away and the cavity was tamponed with bichlorid gauze. The dura was not closed. On the third day removal of the dressing was followed by a discharge of turbid fluid.

The patient had an uneventful recovery; his vision improved and he returned home two weeks after the operation.

The diagnosis was glioma of the occipital lobe. Some time after the operation the patient presented the following condition: At the site of the cranial opening there was a soft bulging mass about three inches in diameter; there was no return of tumor; he could read the headlines of newspapers, and could tell the time from a watch; he saw everything perfectly; did not read fine print; his discs were very white.

This patient has disappeared from view, but was alive and at work as a coal miner, and able to see well three or four years after the operation.

CASE 3.—A. G., aged 22, a machinist, was admitted to Cincinnati Hospital May 15, 1894, because of cystic dilatation of the diploic vein, and Jacksonian epilepsy. His pathologic history was negative. The previous history showed that he began to have convulsions at the age of 7, but after a while these disappeared, but reappeared when he was 14, and since then he has been having them every month. The convulsions were always preceded by a sensation of numbness, and formication of the left leg. Convulsions began in the left leg, then left arm and became general. He did not suffer from headache, vomiting or vertigo.

The physical examination was negative. The epileptic seizures were followed by maniacal attacks, during which the patient became very violent, showing a tendency to attack other patients in the ward. He was blindly destructive and had to be retained with shackles; the attack is typically mania and never lasts longer than twenty-four hours. He did not remember what occurred during the maniacal condition, and immediately after an attack he was dull and apathetic. The pupils were equal in size; responded to light and accommodation, and the external muscles of the eyes were normal. There was no disturbance of sensation of scalp or face; no evidence of injury or depression of skull; region supplied by seventh nerve was normal; the pharyngeal and palate reflexes normal. There was no loss of muscular power or sensation in either arm or leg; slight exaggeration of reflexes in left leg; no ankle clonus; no muscular weakness whatever of the left leg. The diagnosis was Jacksonian epilepsy.

June 21 to July 11 he worked around the ward and felt perfectly well. On May 15 he complained of pain in the left leg and arm. Bromid, 30 grains, was ordered every four hours. About 10 o'clock he complained severely of pain in the left leg, which was bandaged; following this was a delirium in which the patient cried and laughed; this lasted an hour and then he became quiet. During that time he was given chloral, 20 grains, and bromid 30 grains; he went to sleep at once and slept until morning. On June 26 he had two slight hysterical attacks, but was better next day, and was discharged at his own request. He had bromids and chloral since May 12, and had no epileptic attack since his admission.

July 30, 1894, the patient was re-admitted to the hospital. He admits having had gonorrhea but denies syphilis. Because of advisability of performing an operation his relatives were summoned and they gave a somewhat different history from the patient. The latter states that he has had attacks since the age of 7; his sister says that the attacks began in the twelfth year, three months after being struck on the back of the head with a brick. She states that he was brought into the city hospital unconscious, and was discharged in about a week. No record can be found. The examination of his head over the occiput reveals no scalp wound or depression of skull. The sister agrees with the patient as to the characteristic feature of the attack, that is, that it always begins in the left leg and extends to the left arm and face and then becomes general. She also says that he has attacks during which twenty-five to thirty convulsions occur in as many hours the patient often being unconscious during the entire period. During the last few days of August the patient complained of pain in the head. One night he had three convulsions, each lasting some minutes, and all characterized by muscular contractions beginning upon the left side. In the first one the left leg was flexed first. He slept soundly between the seizures. A fourth attack followed, the next morning. This was witnessed by the day nurses, and they say it was of the same general character as those described by the night nurse. Later the patient suddenly got out of bed and was caught in the act of jumping out of the window. He complained of great cephalalgia, was restless, tossing about the bed and much excited. I ordered acetanilid, 10 grains, at 9 a. m., and 5 grains thereafter, every three hours. After observing the patient for seven days, during which he had four seizures, all typically Jacksonian, followed by a slight transient weakness of the left leg, it was determined to make an exploratory operation. He was removed to the amphitheater August 31, anesthetized, and an oval incision made over the right parietal region, the bone having first been scored in order to mark the position of the Rolandic fissure; after the flap had been turned back, the trephine was then called into use and a button of bone removed over the region of the motor area for the left foot—before using the trephine there was noted a bluish line in or on the bone, running downward and forward almost parallel to about one-half inch behind the Rolandic fissure—the trephine opening was then enlarged downward and forward, and in the process there was opened a sort of venus sinus between the two layers of bone, and corresponding in situation to the blue line mentioned. The venus sinus had eroded the inner table of the skull, forming a cystic protuberance about the size of a bean. This caused a perforation of the dura mater—the dura for an area of two inches in diameter about this perforation was very much thickened and inflamed. On removing the body flap there protruded through the dura a sort of hernia of the pia and brain tissue. The dura was slit up in a crucial manner and both the dura and pia found much thickened and edematous; beyond this nothing was found, the cortex appearing normal. To arrest the hemorrhage from the venous sinus it was found necessary to introduce a sterilized match as a pug; this was left in the wound. Hemorrhage from other points was then arrested, the dura stitched together with interrupted gut-suture, the flaps of skin brought together with a continuous silk suture, and a plain gauze dressing applied.

On September 6 the stitches were removed. An examination of the special senses was negative. For the first two days after the operation the patient was restless, irritable and exacting, afterward was more liberal in his demands and much more rational.

September 19. There were no symptoms whatever, he pronounced himself well.

September 26. He complained of pain in the left leg, chiefly in the region of the knee-joint, which he was unable to explain; examination was negative. Patient said he had no sensations like those which used to precede an epileptic attack. He was ordered to bed and 30 grains of potassium bromid were given him.

October 8. He was up and around the ward; no symptoms at all.

October 17. No attacks at all; general condition good.

November 3. Discharged, well.

In December he returned for his epilepsy, saying that he had been free of attacks since the operation except two or three very light ones, neither of which were like his previous ones, and which he had been able to fight off. This morning, however, he had an attack exactly similar in every detail to those previous to the operation. He was given 15 grains potassium bromid. From this time until January there were no symptoms, no attacks and his condition was good. On August 25 he was discharged. On September 5 he returned to the hospital, saying that he had had an epileptic attack. He died at the County Infirmary about eighteen months after operation, during an epileptic attack.

In this case the recurrence of the epilepsy and the death of the individual were caused by the meningitis, which was set up by, and continued after, removal of the cyst.

CASE 4.—R. G., aged 10, colored, was admitted to Cincinnati Hospital May 20, 1895. The family and personal history were negative. There had been a gradual development of weakness and stiffness of the left arm and leg. This had lately increased to such an extent as to interfere with the use of the left arm altogether. The left leg was stiff and rigid and was dragged during walking; he had no pains in the extremity.

Examination gave the following: Mental condition was dull and apathetic; there was a tendency to somnolence. When aroused the mind was clear. Pupils were equal in size and reacted to light. Papilla was swollen and injected; there was choked disc. The external muscles of the eyes were normal in function. There was no defect in sensation of face or scalp; the left side of face—lower half—was paretic; the tongue protruded to the left. The left arm was rigid and spastic; the radial and triceps reflexes were increased; the muscular strength was reduced almost to a minimum; the size, the surface temperature and the sensation of arm were normal. The leg was normal in size and temperature; the muscles rigid and hard; the limb in condition of spasticity; the reflexes increased. There was ankle-clonus; muscular power was almost entirely lost; he was scarcely able to walk; dragged the leg, but the sensation normal. The diagnosis was spastic hemiplegia, subcortical brain tumor.

Dr. Ransohoff, after careful examination, decided to perform an exploratory operation. The diagnosis of subcortical tumor of the arm center of right side was made; the skull over this region was trephined, and a piece of bone about two inches in diameter was removed; the bulging of the brain and membranes was very marked, but on opening the dura the cortex of the brain was found intact. An incision was made through the cortex about an inch in length, but, as proved later, this was not made deeply enough. No tumor being found the wound was closed. Death occurred six hours later from shock. The autopsy showed a soft yellowish mass, fully the size of a hen's egg occupying the region of the nucleus lentiformis of the right side—it extended outward to within one-half inch of the cortex—extending upward into the region of the ascending frontal and parietal lobes, viz., the centrum semiovale; inward and downward it extended to the internal capsule. The microscopic examination showed the growth to be a tubercle.

The justification of the operation in this case lay in the fact that if the tumor could have been reached it might have been scooped out, and life could not only have been prolonged but have been made more endurable. That it could have been reached was shown by the autopsy. The growth was situated exactly under the trephine opening, and if the incision which was made in the cortex had been a quarter of an inch deeper the tumor would have been found during life.

CASE 5.—F. B., aged 46, was hit by a flying brick on the left side of his head. After being struck he boarded the electric car and rode to the foot of the steps leading to the Marine Hospital; while ascending these steps he fell down and was carried into the hospital. Examination revealed nothing but a scalp wound, over the temporal muscles, which was attended to by the resident surgeon.

He recognized his son one hour later, then became unconscious; he knew nothing of having been taken home, except that he inquired after his son, when put in wagon. After three days he recognized his son again. Two weeks later he recognized Dr. B., the attending physician. The first three days he did not say anything, then gradually regained his power of speech.

Examination showed his mental condition was good; memory good, but that he had lost knowledge of the names of objects; spoke in broken sentences because he could not remember words—knew what the object was but could not name it. This was more marked in his mother-tongue than in English, the knowledge of which is rather imperfect. He became excited under examination.

The eyes, face, tongue, extremities, pulse and temperature were normal. The head showed a depressed fracture under the temperal bone, circular in character, about the size of a dime—left side.

The treatment was iodid of potassium and protoiodid of mercury. An examination August 1, 1896, five months after the accident, showed that the patient had been growing worse gradually. He showed a great deal of absent-mindedness, and mental confusion. He loses himself; the speech defect has grown much worse; he is unable to repeat a word of two syllables. His mental condition is dull, sluggish and apathetic, almost stuperose. Speech is very much embarrassed. On August 3, 1896, he was operated on by Dr. E. W. Walker. The trephine was applied directly over the area of depression. The inner tables showed a cone-shaped depression of bone with the apex piercing both dura mater and pia mater and entering the cortex of the first temporosphenoidal convolution, cyst had formed about the apex of the depression and had attained the size of a small English walnut. There was no fever; the recovery was uneventful. Mental confusion, apathy, and dulness disappeared. Aphasia remained as it was. In May his condition was much better than immediately before the operation. In October, 1896, the aphasia was about the same; he could not repeat a long sentence. The right pupil was larger than the left; both responded to light. His mental condition was good.

May, 1900, the patient still had some sensory aphasia, but he spoke connectedly; carried on an ordinary conversation without much difficulty; had some trouble in remembering names, especially if the object was changed rapidly and an effort was made to hurry him.

There are two interesting features of his case: 1, the overlooking of the fracture of the skull by the first physician; 2, the apparent recovery, followed by symptoms of intracranial pressure. The first was due to the fact that the fracture was under the temporal muscle, which was not cut, the scalp wound extending down to the muscle-sheath; the muscles were probably contused and swollen, and it was very easy to overlook so small a fracture. The second feature, the rapid increase of all the signs and symptoms of intracranial pressure, during the fifth month, indicating brain tumor, except that there was no optic neuritis, was evidently due to the rapid increase in the size of the cyst—Bergmann calls attention to this feature of traumatic cysts.

CASE 6.—J. M., a German plasterer, was admitted to Cincinnati Hospital May 30, 1898. He complained of convulsions of the left arm and leg, followed by anesthesia of affected areas, lasting about half an hour. His family history was negative. As a child he had measles, mumps, and scarlet fever. No venereal history was obtained; he chewed tobacco, and drank beer to excess till one year before his admission to the hospital. There was no drug habit.

About seven years before, while ascending a ladder, his left leg suddenly became helpless, causing him to make a mis-step, and he fell a distance of fifteen feet, but as he fell on a sofa he sustained no injury at the time. He did not lose consciousness, but immediately felt numb in the entire left half of the body; this feeling lasted about twenty minutes. After the numbness passed away he went to work feeling no ill effects. About one month later he was seized in the same manner and the attack lasted about the same length of time.

The attacks gradually increased in frequency till the fall of 1897, when he would sometimes have two attacks in one day.

Up to this time the patient was as strong as he ever had been; but had ceased to work at his trade two years previously for fear of falling and injuring himself. Attacks had become less frequent, so that none had occurred since February, except on April 19, on which day an attack occurred, preceded by bilateral clonic spasms lasting two or three minutes, followed by the usual left-sided numbness and weakness. All attacks previous to this one were preceded by unilateral clonic spasms of the left side lasting about two or three minutes. For the last six years the symptoms and attacks have occurred in about the following order:

1, full side headache lasting about twenty minutes; 2, vomiting, the vomitus consisting principally of bile; 3, dull aching pain over the right eye, lasting from five to twenty minutes; 4, tonic spasms of left arm and left leg; 5, numbness and weakness, lasting about thirty minutes.

Examination showed that his body was fairly well developed and nourished. He had a dull, rather languid expression of the face. His cerebration was somewhat slow, and he had a slight difficulty in talking.

Cranial Nerves.—First, normal; second, he could discern persons across the street, but could not recognize them; he could not read the newspaper at any distance; there was no aphasia. Optic neuritis was present; pupils reacted to light and accommodation; third, fourth and sixth were apparently normal; fifth, motor and sensory, normal; seventh, weakness of muscles of left side of face; ninth, tongue deviates to the left side; tenth, some difficulty in breathing in morning. Troubled considerably with hiccoughing; eleventh, on turning head to left, severe pain in right occipital lobe, similar pain in left lobe on turning head to right; twelfth, normal. There was some difficulty in swallowing. Motility, muscular power and grasp apparently normal and equal. Flexion, extension and power of right leg normal. Right leg was also affected at times, but only temporarily; often had passing weakness, rigidity and ankle-clonus. Unable to lift left leg from bed when extended, and when it was elevated can not flex nor extend it; resists bending somewhat, but no pain on bending. Left arm becomes exhausted easily; some inco-ordination; slightly weaker than right.

Gait.—Dragged left leg and foot; left arm hung almost motionless at side, although he had use of it; head inclined to the left side.

Sensation.—Pain, tactile, heat and cold, normal.

Reflexes.—Right and left knee exaggerated; right and left ankle-clonus marked; right and left wrist-jerk marked; right and left elbow-jerk marked.

Bladder.—He had frequent sensations of wanting to urinate, but had considerable difficulty in starting the stream. He sometimes voided urine before reaching the closet. Expelling force of bladder was much diminished. The rectum, lungs, heart, and urine were abnormal.

Exploratory trephining was done by Dr. Ransohoff over motor area of right side, but nothing found except much cerebral bulging. The patient died the same day from shock. The autopsy showed an oval opening about five inches by two and one-half inches in the parietal region of the right side, its lower margin about one and one-half inches above the external auditory meatus and the upper margin about one inch from sagittal suture. Just anterior to sagittal suture, about one inch in front and toward the median line from the opening in the calvarium, was an extensive thickening of the bone tissue circular in shape. At its central point, where it was thickest, the growth was about three-fourths of an inch thick. This thickening was due to the periosteal deposits, as the outlines of the calvarium could be plainly discerned directly under this thickening; dura mater was adherent to the brain.

The longitudinal sinus was obliterated by a soft semi-fluid, cream color growth. Under the dura mater was a growth about the size of a goose egg, which began on the surface about two inches from the tip of the first frontal convolution and extended backward along the longitudinal fissure to about two inches posterior to the fissure of Rolando.

The cortical size of this growth was about three and one-half by two and one-half inches, and occupied the posterior

half of the first and second frontal convolutions and the upper half of the ascending frontal and ascending parietal convolution around the fissure of Rolando and backward into the gyrus angularis. It bulged into the longitudinal fissure and pressed on the median surface of the psychomotor area of the left side.

Subcortically, it extended into the corona radiata, pressed on and destroyed the posterior portion of the lenticular nucleus and the fibers of the internal capsule. The cortex above the tumor was entirely obliterated, whereas the cortex of the lower portion of the psychomotor area and the portion of the corona radiata beneath it was intact.

The tumor was soft and fluctuating On section it was semisolid, very soft, creamy in color and rather vascular. After being hardened it proved to be non-infiltrating, and could be shelled out with ease. Microscopic examination proved the tumor to be a gliosarcoma.

The interesting features of this case are: The long duration of the tumor's growth—seven years elapsing between the onset of the first symptoms and the death of the individual. Death was due to shock of the operation, and life might have been prolonged for some time. This feature alone is interesting in a therapeutic sense, because the hardened brain specimen shows that the tumor could have been shelled out if the calvarium had been opened just over it; the difficulty lay in the proximity of the growths to the longitudinal fissure. It proves once more that growths of long duration are more apt to compress the brain matter than to infiltrate the brain substance, and that, therefore the operative success is more promising than in those of more rapid growth. The second peculiarity is the presence of bilateral symptoms, viz., the frequent variation of the involvement of the right side of the face—a condition which can probably be explained only on the basis of varying pressure of the tumor on the corona radiata of the left side of the cerebrum and then the change—the involvement of the right leg and foot—the presence of spastic paresis and ankle-clonus at one examination and their absence at the next. These variations of symptoms were easily explained at the autopsy, but during life were a source of continual doubt as to whether the tumor was cortical or basal. The presence of the tumor mainly in the lobus paracentralis of the right psychomotor area, pressing upon the lobus paracentralis of the left psychomotor area, explains the bilateral spastic symptoms; and the variability of the symptoms were, in all probability, due to the increase and diminution of the vascularity of the growth. It is a little strange that the growth, by irritation, never produced an attack of localized epilepsy in the right foot.

CASE 7.—C. R., was admitted to Cincinnati Hospital July 12, 1899, in a state of coma. A friend stated that he was subject to epileptic fits, and during an attack fell backward down six steps and struck on the back of his head. He could be aroused, and answered questions, volunteered no statement, resisted attempts at examination; vomited greenish fluid; had use of all his limbs; tried to walk, but had to be supported; complained of back of neck hurting him.

Examination.—His head showed no evidence of injury. The pupils were dilated, left more than right; no reaction to light. The conjunctiva was injected; the tongue was coated and furrowed longitudinally, and protruded in the median line. He resisted all attempts at movement of his extremities, but could move them at will.

Reflexes were all increased on the left; right negative. Muscular power was decreased, much more on the left. Sensation was normal. The urine was small in amount, pea-green in color, and contained a small amount of albumin.

July 13.—Coma deeper, respiration stertorous; could still be aroused. Left side, both arm and leg were in a state of spastic rigidity. No voluntary movements in arm or leg of this side; right arm and leg were normal. Pupils were moderately contracted, and did not react to light. Urine was passed involuntarily. At 6 p. m. he could not be aroused. His mouth was drawn to the left. Reflexes were lost on the left side; no voluntary movement of this side. Arm and leg were rigid. Reflexes on the right side were greatly exaggerated. He was very restless, constantly moving right arm and leg. There was Cheyne-Stokes respiration; mucous râles could be heard all over the chest. His temperature was 103 degrees, and his pulse rapid and irregular. Operation was performed at 11:30 a. m.; the fissure of Rolando right side was marked off and trephine opening made over lower extremity. There was no fracture; no extradural hemorrhage, and very slight pulsation of the brain. The brain opening was enlarged and an incision made in the dura, followed by a gush of partially clotted dark blood. Brain tissue immediately protruded into the wound, was dark and congested and at lower angle of wound showed areas of softening about one by three-fourths of an inch. Blood welled up from the opening for a time, containing brain tissue. The wound was gently cleansed with warm water, and dura partially closed with catgut, the opening being left over soft area, small rubber drainage-tube placed in cavity, and drain of silkworm gut externally and scalp sutured, leaving good-sized opening for drainage at lower angle of wound.

When dura was opened the clot removed, and the anesthetic discontinued, spastic condition of the left side disappeared and voluntary movement was possible and rather freely performed. This soon disappeared and patient relapsed into former condition. After removal to the ward condition gradually became worse and patient died without regaining consciousness at 2 p. m., July 15, 1900.

The post-mortem showed no evidence of external violence. There was extensive hyperemia of both hemispheres. Punctate hemorrhages were seen over—ten or twenty in number—the surface of both hemispheres from the size of a pin head to that of a split pea. On the tip of the frontal convolution of both sides there was an infiltration of blood on the surface the size of a dime; on section these bloody surfaces were found to cover a cyst about as large as a hazelnut; there was clotted blood in the middle fossa. Over temporosphenoidal and running anterior to knee of fissure of Sylvius was a large blood clot. The cortex below was extensively destroyed with opening leading into large cavity the size of a hen's egg. This cavity extends down to and involves the internal capsule. In parts of the wall the cyst shows black spots, size of pin head; other parts red; posterior portion of cavity, the cortex is destroyed and replaced by a soft and granular mass. This infiltration extends for considerable area around cortical margin of cyst, replacing normal cortex. Major portion of cortex surrounding cavity is softened, probably acute softening from hemorrhage destruction. Five other cysts were found on surface of both hemispheres; one on tip of each frontal lobe. The others were over the parietal lobes and the temporosphenoidal. These varied in size from a bean to a hazel nut. They are covered with pia mater. On opening them the cavity is conical in shape and the apex is formed by a small round hard mass, laminated and dark brown in color; the cortex is destroyed and the contents yellowish-red in character.

In various regions the pia is adherent, and a granular mass extends from its under surface into the cortex, being continuous, and apparently infiltrating the latter. The basilar ganglia, interpeduncular space, medulla, cord and bridge show no gross anatomical changes.

Close inquiry among the friends elicited the information that the patient had had about six epileptic seizures in the past year, and had been perfectly well before. He had always been at work, and was taken with his last epileptic seizure during a night of dissipation in a house of ill-fame. No other history could be elicited. No history of syphilis, and with the exception of the epileptic seizures, he enjoyed the best of health and did not consider himself sick.

Before the operation, having no previous history of the case, it was thought that the fall produced a subdural hematoma, and the finding of the numerous hemorrhagic cysts was quite unexpected. The epilepsy undoubtedly was caused by the presence of these cysts, and the fatal hemorrhage was undoubtedly the result of

a rupture of one of these cysts, superinduced by the fall on the back of the head.

When we look over the tables of published operative cases which have been collected from the world over, we are struck with the small number of cases. The brain is a favorite seat of tumors and we all know how frequently they occur.

Bergmann, basing his opinion on an analysis of Hale White's 100 cases of brain tumors, found in the autopsy room of Guy's Hospital, Seydel's 50 cases, Allen Starr's 600 cases, compiled from all sources, and Oppenheim's 23 cases, all carefully observed *intra vitam* and after death, comes to the conclusion that at most but from 6 to 7 per cent. of all brain tumors can form the subject for surgical interference, and that to all intents and purposes brain surgery, with rare exceptions, resolves itself into the surgery of the psychomotor areas. We should not be discouraged, however, by the result of this analysis, but should be spurred on to greater exertions, to greater efforts in singling out the favorable cases. I can do no better than quote Bergmann again: "Among the tumors which grow in the cortex and can, therefore, be reached by the knife, those are most frequently present which promise favorable results from an operation, viz., tough fibromata and sarcomata, which are well encapsulated, have their seat of predilection in the gray matter of the cortex, and when once removed do not seem to recur. Even the most benign brain tumor is a fatal disease, for it grows without a halt, and it is this very growing which threatens to destroy the mental as well as the physical life of the patent. There is but one way to put a stop to this growth, the timely removal of this dangerous, although histologically benign tumor." Considering the necessarily fatal result of this trouble, results of the surgical interference are not bad. Its future lies in the hands of the neurologist and not the surgeon. For the most important point in brain surgery is the accuracy of the diagnosis and localization. This is illustrated by the comparison of the statistics collected by Von Hippel and published in Bergmann's latest work on brain surgery. Von Hippel collected all the published operations on the brain and these can be divided into two groups: 1. Those cases in which the brain tumor or cyst was accurately located and removed; 2, those in which the localization was defective and the so-called exploratory operation was made. The first group comprises 116 cases; in all of them the tumors were removed and 60 per cent. of the cases were decidedly improved or cured, and only 7 per cent of the cases were not benefited at all or died as a result of the operation.

The condition, however, is entirely different in the so-called exploratory operations or in those cases in which, although the tumor was found, it was too large for removal. There were 157 of these cases and the operations were either useless or worse, for 47.7 per cent. died as the direct result of the operation. If all the unsuccessful cases were reported, I am quite sure that the number of cases in Class 2 would be increased by several hundred, and the mortality percentage of the operation would be still greater. There is but one lesson to be learned from these statistics, and it is, if you can not localize your tumor do not operate. There is only one possible condition which can suspend the operation of this rule and that is palliative trephining for the relief of unbearable intracranial pressure, when we fail to obtain relief by the Quincke puncture.

The main obstacle which lies in our path of success is the difficulty of diagnosis and accurately locating the tumors and cysts. These difficulties are nowhere set forth in a clearer light than in Prof. H. Oppenheim's address delivered before the joint session of Neurology and Surgery at the International Congress held in Moscow in 1897. Speaking of brain surgery he says: "The whole subject is still in the developmental stage, a subject of future solution and in only a few places can we make a sharp distinction between that which is true, solid and enduring, and the counterfeit and evanescent. We have become calm and sober because we realize that we stand on uncertain ground and that of the fruits for which we strive scarcely a single one has ripened. The rocks on which the hopes of surgery of the brain have been shattered in the past have not been a defective technique nor the inherent danger of attacking the brain, but the uncertainty of diagnosis." What was true in 1897 still holds to-day. Although the advances made have been great, we are still far from standing on solid ground in brain localization. This is partly due to the inherent difficulty of the subject and partly due to a sufficient lack of pathologic data. This difficulty of accurate localization even when the lesion clearly points to the psychomotor area is clearly illustrated by two of the above cases, viz, 6 and 4. In Case 6, on account of the variation of the signs and development of bilateral involvement, it was, for a long time, almost impossible to locate the tumor. It was first thought that the tumor was at the base of the brain. The marked character of the epileptic seizure led us to open the calvarium over the left leg center, near the arm center. No tumor was found; the autopsy, however, cleared up the diagnosis and explained the difficulty. The tumor was in the right lobus paracentralis; the involvement of the right leg was due to the pressure of the tumor on the lobus paracentralis of the left side, the fluctuation in the involvement of the face and tongue was caused by the extension of the tumor into the centrum semiovale and the pressure —distant—upon the internal capsule.

If it had been possible to locate the tumor accurately, the operation would probably have been successful, for

	Name, Sex, Age.	Operator.	First Symptom.	Local Symptoms.	General Symptoms.	Optic Disc.	Operation.	Seat of Tumor.	Result.
1	Mr. L.; 32	Ransohoff; Hoppe.	Jackson epilepsy.	Jackson epilepsy of l. arm and leg.	Generalized convulsions, headache, vertigo	Negative	Trephining	Right foot and arm center	Hemiplegia; epilepsy; still alive; seven years.
2	T. B.; male; 18	R. Sattler; Hoppe.	Hemianopsia	Total blindness	Headache, vertigo, nausea	Pale.	Trephining	Left occipital lobe	Recovery of sight; still alive; seven years.
3	A. G.; male; 22	John Oliver; Hoppe.	Jackson epilepsy	Epilepsy; epileptic insanity.	None	Negative	Trephining	Cyst over right leg center	Improvement for 6 mos.; died after one year.
4	R. G.; male; 10	Ransohoff; Hoppe.	Spastic par'sis of left arm	Spastic hemiplegia	Headache, apathy	Choked disc.	Trephining	Subcortical motor area. Right side	Died in four hours; shock.
5	F. B.; male; 46	E. W. Walker; Hoppe.	Sensory aphasia	Sensory aphasia	Headache, mental confusion	Negative	Trephining	Cyst of 1st temp. sphen. lobe. Left side.	Much improved for sensory aphasia; still alive.
6	J. M.; male; 32	Ransohoff; Hoppe.	Numbness; weakness of left leg	Jackson epilepsy; hemiplegia; diplegia.	Headache, vertigo, apathy	Choked disc.	Trephining	Right foot center.	Died from shock in four hours.
7	C. R.; male; 23	Ransohoff; Hoppe.	General epilepsy	Spastic hemiplegia	Coma, convulsions	Negative	Trephining	Multiple cysts	Died from cerebral hemorrhage.

the hardened brain showed that the tumor could have been enucleated. Case 4 offers a similar difficulty of accurately locating tumors of the psychomotor areas. The diagnosis of subcortical tumor of the arm center was made, but it was impossible to say how near the tumor was to the cortex or how near it was to the internal capsule. But viewed in the light shed upon the subject by the autopsy we can say that the preponderance of the spastic signs over the paretic and the entire absence of Jacksonian epilepsy should have shown us that the tumor was near the internal capsule, and should have been subject to an operation.

For more detailed accounts of the difficulties of diagnosis and localization, and distinguishing tumors of frontal lobe from those of the cerebellum, of the parieteal and occipital lobes, I would refer the reader to recent publications of Fritch and Hitzig, Knapp, Hermanides, Oppenheim, Bruns, etc.

The following are the conclusions which most authorities have come to, as a result of the observation of their own cases and the study of the literature on the subject:

1. Tumors of the cortex or subcortical region of any portion of the cerebral hemispheres which can be reached through the calvarium are operable.

2. If possible the operation should be performed early, when the tumor is small; but even large tumors and those infiltrating in character, have been operated on with success.

3. A study of the successful cases shows that, with few exceptions, brain surgery is limited to the psychomotor areas (Von Bergmann).

4. The result of surgical interference even in the most successful cases, rarely leads to complete recovery. The general symptoms due to intracranial pressure disappear, but the focal symptoms, viz, the epileptic seizures and paralysis, either remain permanently or are only diminished. It must not be forgotten, however, that the life of the individual has been saved.

5. Cerebellar tumors are inoperable. This is the law laid down by Oppenheim and concurred in by Bergmann. Those of the posterior and upper surface of the cerebellum, near the lower margin of the occipital lobe have been removed, but the operation has been invariably fatal (Oppenheim). The danger is due to the crowding of large sinuses into a small field of operation and the pressure upon, and displacement of, the medulla. Occasionally a cyst has been luckily tapped, but we can never localize with certainty, and we all know how disastrous exploratory operations are in this region.

6. The cumulative experience of all writers is against the exploratory operation.

7. Shall we advise palliative operations? On this subject authority is divided. Horsley, Bramwell, Annandale, Sanger, Sahli, Sinking, Keen, Bruns, and perhaps Oppenheim are in favor of palliative operations for the relief of violent symptoms of increased intracranial pressure in rare cases. Von Bergmann and Von Braman are against it. My limited experience in cases in which I refused to advise an operation and the operation was, nevertheless, performed, has been with those who oppose the operation.

8. I do not agree with Oppenheim that gummata should not be operated on. I have in my possession the brain of a man who refused to be operated upon which shows that the gumma could have been removed successfully. This gumma was located accurately and diagnosed as such in the arm center during life. In my opinion, tubercles, if isolated and located so as to be operable, should be operated upon, other things being favorable. Metastatic carcinomata are inoperable.

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DISCUSSION.

DR. DANIEL R. BROWER, Chicago—Dr. Hoppe's paper quite harmonizes with the Chairman's admirable address, and emphasizes the fact that we do cure some patients. This question of brain tumor is one of exceeding interest, but I am free to confess than in my experience I have not had as favorable results as Dr. Hoppe reports. While I have in some cases seen temporary benefits follow operation, and while I am sure I shall continue to recommend operations, I have yet to see in my own clientage a recovery. The differentiation of a cortical from a subcortical is usually impossible. A short time ago a case presenting all the classical symptoms of tumor in the motor area, was referred to Prof. N. Senn for operation; he failed to find the tumor, but post-mortem examination found it a gumma, as was supposed, just beneath the cortex.

DR. CHARLES H. HUGHES, St. Louis, Mo.—I think the position taken by the essayist is eminently correct. The subject of cerebral tumors, especially the tumors involving the optic area of the brain, is particularly interesting. I would like to see more records of the ophthalmological evidences in these cases for diagnostic purposes. I saw a case before the New York Neurological Society, on my return from Europe last year, in which the diagnosis hinged on the neuroretinitis, or choked disk, and I believe I have never seen such a case of tumor which did not reveal the retinal symptoms. This, of course, is merely my own personal experience. The first case of brain tumor that I ever operated on was a great many years ago, and I found the tumor in the area that showed negatively how valuable the recent discoveries were in regard to the psychomotor areas of the brain. The next operation was performed before the subject of aphasia was so thoroughly understood, and was the case of a patient who became an automaton: he lost the capacity of speech, and it was only necessary to give him a start and he would walk from one end of the corridor to the other. After the operation the patient began to speak, and became annoyingly loquacious.

DR. WILLIAM G. SPILLER, Philadelphia—Dr. Hughes' remarks on the presence of optic neuritis in brain tumor lead me to speak of two cases I have recently observed. One was a case reported by Dr. C. K. Mills; I saw the patient with Dr. Mills a number of times, and in that case there was no optic neuritis. The tumor was removed, and the patient improved very much after the operation. In a case that has been under my care recently, optic neuritis played a very important rôle in diagnosis. The patient was sent to me with symptoms of disease of the spinal cord, in the upper cervical region; she had stiffness of the neck, so that the head could be only slightly moved in any direction, and had other symptoms of tumor in the cervical region. I sent her to Dr. Hansell for an examination of her eyes, and he found that she had a high-grade neuritis in each eye. That was the only cerebral symptom she had, except loss of smell. The optic neuritis in this case led me to believe that probably the tumor was not confined to the vertebral canal. I found at the necropsy a tumor in the upper part of the cervical region, which had gradually grown downward and pressed on the cervical cord, and had extended to the third or fourth cervical segment, but had not involved the cord except by compression. The tumor extended upward

along the base of the brain and covered the medulla oblongata and pons.

DR. A. E. STERNE, Indianapolis—I have recently had rather a considerable number of operations, for, as you know, they frequently come together. In the first two weeks of March I had five operations on the brain. Some time in February of this year I lost a case through what I thought to be neglect on the part of the attendants at one of our hospitals in Indianapolis, a case which I had every reason to believe would recover. Dr. Hoppe's mention of the word "shock" recalls the case to me, as I have lost no case since I have made it an invariable rule to count shock as a part of the operation. I expect shock to follow; I do not wait until it comes. If there has been any degree of loss of blood, as there usually is in these cases, I feel almost sure that I am going to have shock, and I feel sure that we will have a rise of temperature up to 105; that is the rule, although it has frequently been supposed to be a fatal symptom. Before the patient comes from under the effect of the narcotic I have invariably given a saline infusion, and sometimes in addition to that a large enema, adding hypodermics of strychnia, in one case as high as 1/40 grain every ten minutes, keeping this up for the first twenty-six hours, and giving smaller doses thereafter. In that case the patient recovered, although, of course, it seemed a huge amount of strychnia to use. In all the subsequent cases I have had no ill results, and the last seven cases have all recovered. Of course, so far as concerns the final results of those cases, the time is as yet too short to decide; two were for tumors, two for cysts, and three were for conditions of idiocy. In the last three cases the idiocy was combined with spastic symptoms of a motor nature, and almost the entire top of the skull was removed, making a trephine opening on one side and a trephine opening on the other, joining in a circular fashion. No evil results whatever have occurred. I warned the family that they could not expect results immediately, and possibly not for several years, and I believe that precaution should always be taken.

I find that surgeons, as a rule, who are not neurologists are afraid to go deeply into the brain. There is no reason why they should not go deeply. We operate on internal hydrocephalus; why can we not go deeply into the brain at any time, always, of course, with the certainty in mind that a few symptoms in the motor area will follow? Owing to the fact that you have cut into the motor area there is usually a slight paresis remaining. So far as choked disk is concerned, it seems to me that optic symptoms are much more apt to be present in tumor. Cysts and abscesses do not produce choked disk in my experience nearly so often as the tumors, even when the tumors are of much less extent. Probably this is due to the greater consistency of brain tumors in comparison to the other lesions, and, therefore, the intracranial pressure will be the higher.

DR. MAXIMILIAN HERZOG, Chicago—I have been interested for some time in the subject of brain tumors from the standpoint of the pathologist, and I want to make a plea for a more exact classification of brain tumors. I think that blood cysts, and other cysts not true neoplasms in their nature, should not be included when we speak of brain tumors. Even if we find certain common clinical features we are not entitled to treat conditions so fundamentally different under the same heading. The books generally contain the statement that sarcomata are the most common neoplasms of the central nervous system. I am, from my own observations, inclined to doubt this statement, and I believe that gliomata are the most common tumors of the central nervous system. Dr. Hoppe reports among his cases one operated on, and well three years after the operation, as a sarcoma. I somewhat doubt the correctness of the pathologic diagnosis; I rather believe that this tumor was a glioma. It is sometimes not at all easy to make a correct histologic diagnosis of tumors of the brain, hence formerly many were diagnosed as glio-sarcoma, a classification which has been abandoned entirely for obvious reasons.

DR. H. H. HOPPE, in closing—The autopsy in this case showed that the tumor was much closer to the internal capsule than it was to the cortex. If the tumor is close to the cortex there is no reason why there should not be optic neuritis. As to Dr. Herzog's views with regard to sarcoma, I would say that the diagnosis was made in this case by a pathologist. On the other hand, I have quoted in my paper a statement by Bergmann about sarcoma. There was one point that was not raised, and that is the question of diagnosis and its bearing on the results. Karl von Heller has tabulated all the published brain-tumor operations, and they are given again in Bergmann's book on "Brain Surgery." There are 116 cases of successful removal of brain tumors, and in these cases each tumor was localized before the operation; in over 60 per cent. of these cases were the patients benefited, and in only 7 per cent. was the death due to the results of the operation. On the other hand, there are 259 cases of so-called explorative cases, and in these 50 per cent. died as the result of shock. The point is, that if you can not localize your tumor you should not operate. The great point in brain surgery to-day is the accuracy of localization of the tumor before operation.

THE SKULL AND ITS CONTENTS.*

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If the expression sometimes ascribed to Sir Astley Cooper, that "No injury of the head is too slight to be despised nor too severe to be despaired of," be true, I will need no apology for inviting attention to the subject, except perhaps for the weakness of its presentation. Injuries to the head should possess, for every practitioner, more than ordinary interest, as they entail more than ordinary responsibilities, and when we consider the many and varied conditions met with in this field of surgery, from the slight and apparently trivial scalp wound to the fracture of the base of the skull with its probable accompanying laceration of brain tissue and membranes, and possibly rupture of large blood-vessels, the range of thought necessary to comprehend and combat these conditions becomes apparent.

In the contemplation of this class of injuries we may say, in a general way, that the practitioner must ever keep in mind not alone the skull, but its coverings and contents, as well as the intimate relations existing between them, for even a slight scalp wound, if neglected, may terminate fatally, and what appears to be only a trivial blow on the head may produce fatal cerebral hemorrhage. We must, therefore, be prepared for any reasonable probability or possibility and must by the exercise of forethought and intelligently applied treatment strive to secure satisfactory *immediate* results and prevent undesirable *remote* ones. The anatomic position of the head being one of special and almost constant exposure to violence predisposes to a large number of injuries. The delicate nature of the skull contents predisposes to the gravity of these injuries, while the intimate relations existing between the coverings and contents of the skull, although apparently separated by a closed, bony wall, teach us that injury to the former predisposes to disease of the latter and should teach us how prudent it will be on our part to guard against possible unfortunate results by prompt and intelligent action. The natural openings which lead to the interior of the skull, while in their normal condition and undisturbed by traumatism, serve the purposes of their existence without imperiling the integrity

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of neighboring structures, but when once seriously interfered with they become dangerous channels through which infection may and often does reach the structures lying within the skull wall. Thus it will be seen that nature's necessities predispose to gravity in any injury to the head.

Nature has, however, made many admirable provisions to counteract, as far as may be, the unfortunate though necessary conditions above described. The skull is not only covered by the pericranium and tough resisting scalp, but is also carefully lined for the better protection of its contents, the importance of which protection daily experience demonstrates. The shape of the skull, as well as the varying degrees of thickness which it presents at different points and in different individuals, must necessarily enter into all calculations as to the possible or probable injury to the parts lying immediately within its walls when subjected to violence. The elasticity and resiliency of the skull bones are factors sufficiently important in themselves to merit close study. The especially ingenious and practical arrangement of the anatomy of the skull, giving as it does the best possible protection to its contents consistent with limited weight and general utility, is another of nature's provisions for the protection of its own creation. In brief, the shape, physical characteristics, coverings and lining are so well adapted to resistance and protection that ordinary violence results in but slight injury, usually confining itself to the scalp and external soft parts and not extending to the bony wall or its contents.

The skull has, however, in common with other parts of the body, its limit of resistance, and when this has been overcome a multiplicity of pathologic conditions become possible. These conditions will demand, on the part of the surgeon, an intimate knowledge not alone of the normal appearances of the parts involved, but also of the possible or probable pathologic conditions resulting from any given injury, for on this knowledge —on the accuracy with which the surgeon can estimate the nature and degree of the effects of the traumatism —must depend in a large measure his success or failure in treatment. We know that, apparently contrary to general law, a slight blow on the head is sometimes followed by the most serious results, and vice versa, and we should also know as surgeons that there must be reasons for these strange results, and these reasons must be sought for, utilized, and made a part of the clinical history of each case. It is a well-known fact that a blow on the head may produce any one of a variety of fractures with or without injury to the brain, its coverings or circulation. The outer plate of bone may be broken without the inner being affected, and the latter may be fractured without the presence of any apparent or actual depression in the outer one. The writer met with a case, in 1895, where the postmortem revealed a fracture of the inner plate of the skull 1½ inches in length, great laceration of brain tissue with rupture of the middle meningeal artery, and yet there was not even a scalp wound nor any evidence on the outer surface of the bone to indicate in the slightest degree the character and extent of the injury within. As a rule, however, when fracture exists both plates are involved. When an injury is present it is usually found at or near the part at which the force has been received, although there are occasional exceptions. Whenever there exists an injury of sufficient severity to have lacerated the brain or its membranes, hemorrhage resulting in clot, or more rarely, inflammation resulting in exudate follows. In either case the cranial contents are increased in volume and, as the skull walls are unyielding, pressure on the brain is a natural and inevitable consequence. This pressure, limited at first, is likely to increase until the brain functions are seriously interfered with or until life itself is extinct. The altered and abnormal conditions within the cranium may result in but temporary and trivial altered nerve manifestations, or they may result in partial or complete abolition of the motor, intellectual or sensory brain functions.

It is reasonably safe to be guided by the rule that intracranial pressure, when mild and local in character, will result in but mild and local functional disturbances, but when the pressure becomes general through the extension of the clot or the exudate all functional disturbances become general or the pressure may be so pronounced as to entirely obliterate all evidences of the existence of the nervous system so far as function is concerned.

The injury to the brain substance through traumatism to the head may be very slight, resulting in nothing more serious than a number of pinhead clots which times readily absorbs, or it may be so severe as to require active surgical interference to control the dangerous hemorrhage which is often present. In the more severe forms of injury the patient's loss of consciousness seriously interferes with completeness of diagnosis, but usually sufficient information may be obtained from the history of the accident and an examination of the patient's physical condition to enable the surgeon to arrive at reasonably accurate conclusions.

Where fracture of the skull exists, especially if depression be present, the most important factor to be considered is the condition of the skull contents. The fracture itself is of secondary consideration. Any violence of sufficient force to cause fracture of the skull has in all probability caused some injury to the brain tissue or its coverings, and this injury very evidently assumes a more serious aspect if the fracture be a depressed one, for in this event a section of bone will be pressed down upon the brain coverings and even fragments of bone may be forced into the brain substance itself.

In the consideration of any line of treatment in severe cases our thoughts should center on the probability of injury to the soft parts within the skull, and our efforts must be directed along the lines best calculated to overcome the *immediate* and prevent, if possible, the usual *remote* effects of the injury. Horsley has clearly established that brain scars, scars in the dura and depressed fragments of bone, are frequent causes of epilepsy, and that the removal of these causes usually results in benefit to and often in cure of the patient. We are therefore admonished to exercise great care, at the time of injury, in our efforts to prevent this result.

In outlining a general plan of treatment we would say that no one can hope to do satisfactory work on the skull, its coverings, or contents, unless he is surgically clean. We must not forget that infection is readily carried from the scalp to the brain or its coverings and that such an occurrence can not be too profoundly regretted and, when resulting through the carelessness or the unsurgical habits of the medical attendant, can not be too emphatically condemned. The clinical reports of all careful workers in this particular field of surgery go to prove that we may enter the cavity of the skull and there deal with conditions demanding

surgical attention with the same confidence and assurance with which we enter the abdominal cavity, providing we exercise the same care and possess the same cleanliness. In all operations on the skull the entire head should be shaved and thoroughly disinfected before the skull wall is opened. All foreign matter should be thoroughly removed and, where dirt, hair, etc., have become lodged in the line of fracture, where fracture exists, the chisel and hammer must be used to remove them.

The next care of the surgeon is to ascertain, if possible, the nature and extent of the injury. Where fracture with depression is found, removal of a section of bone, either with the trephine or chisel, places the field of injury open to observation and clears up questions that must otherwise remain in doubt. In all cases sufficient bone should be removed to permit of a thorough inspection of the field of operation.

We now, with the injured parts easily within reach, proceed to treat them as we treat injured structures in other parts of the body. All foreign matter and blood-clots are to be removed, hemorrhage controlled either by hot applications, pressure or ligature, and all ragged edges of the wound excised, securing, if possible, smooth coaptating surfaces. The wound in the brain should be closed with catgut sutures, after which the dura mater is carefully drawn over it and closed with the same material and the outer wound closed and dressed in the usual way. When we feel that our work has been clean throughout, drainage is unnecessary, but if we fear subsequent septic trouble drainage should be provided for; the patient should be put at physical and mental rest and his condition carefully watched for at least ten days. Should septic trouble occur the parts must be opened up and a rigid antiseptic treatment instituted. He must ever bear in mind that the scar tissue resulting in wounds that do not heal by first intention is prone to be followed by those dreaded *remote* effects which are often immeasurably worse than death, and we should, therefore, leave nothing undone which may in any way conduce to or further the prospects of an aseptic result. In cases presented to us for treatment we must not carelessly overestimate or underestimate nature's possibilities, but rather by a careful consideration of all the conditions, facts and symptoms present, intelligently weigh the evidence and draw conclusions in accordance with its drift. Time spent by the surgeon in securing facts to strengthen his judgment is usually time gained for the patient and is therefore well spent.

This paper has not been written with the view of instructing, but rather of inviting attention to a field of surgery worthy, we believe, of more consideration than is being given to it and to stimulate a closer and more thorough study of the conditions with which it deals. Placed in positions where we may be called on at any time to assume the responsibilities involved in such cases we should, in doing even ordinary justice to our patients, be prepared to treat them with a fair degree of intelligence, and they should receive at our hands that degree of surgical skill to which in this day they are fairly entitled. The records of Macewen, Starr, Horsley, Fluchrer, Weismann, and others, combined with our present knowledge of surgical cleanliness, place us in positions to do at least reasonably accurate and successful work on the skull and brain, and when we consider the importance of maintaining the security and integrity of nature's great nerve center and its peculiar liability to injury, time spent in specially fitting ourselves for work in this connection can not be regarded in any other light than that of wise expenditure.

402 Grand Avenue.

TREATMENT OF TYPHOID FEVER.

WITH BACTERICIDAL IN CONNECTION WITH OTHER AGENTS, AND SOME CONSEQUENT DEDUCTIONS.*

J. M. PECK, A.M., M.D.
ARLINGTON, KY.

It would be remarkable indeed for any physician, be he the most humble or the most distinguished—or his work restricted—if he is not called upon to cross swords with the disease designated as typhoid fever. The treatment of a typhoid fever patient, as we shall attempt to describe, is the outgrowth of our acceptance of the now old and universally admitted theory as enunciated by Eberth, and, except in rare instances, the primary and principal site of infection is in the intestinal tract, although there may be undoubted cases in which there is no perceptible inflammatory process in the alimentary canal.

Taking the fact for granted, then, in the great majority of cases that entrance of the bacilli into the system is by means of the ingesta, we would naturally expect the first local manifestation to be somewhere in this tract. This we find to be the actual condition in nearly all cases. In many cases, one of the earliest and most noticeable symptoms is a peculiar diarrhea, which we take to be a well-directed effort of nature to rid herself of the disturbing elements there. Bacteriologists and pathologists of to-day assert that the real disturbing element is not so much the bacilli themselves, but the toxins produced by them. The toxins are the cause of the toxemia, and when this toxicity is extreme, we have a condition of mental and physical inactivity so familiar to us all who have treated or witnessed many typhoid patients treated according to the old expectant way of management. If the Brand or any other treatment has no recommendation above the old, beyond the preservation of the mental faculties, for this alone they would demand our adoption in every possible instance. It seems the Brand method would favorably impress every thinking mind as meeting in a great measure almost every indication possible to be met in an uncomplicated case of typhoid fever except that to be met by means of intestinal antisepsis. But happy is the physician whose clientele is of sufficient wealth that he may carry the Brand treatment into their homes without frequently meeting insurmountable obstacles; or, on whom his grip is so strong that he will not run serious risk of losing desirable patronage and influence. In hospital practice the cold plunge bath stands easily first as a favorite treatment by the leading teachers of the day, but a large majority of the typhoid patients are treated outside of the hospital, and the question arises, what is the most expedient and successful way to treat them? Our very limited experience is to the effect that the nearest approach, in many respects, to the Brand treatment will be attended with the greatest success.

Elimination of the bacilli and also their toxins, in every way possible, not detrimental to the patient, is the very important object to be attained. This is effected

* Presented to the Section on Practice of Medicine, at the Fifty-first Annual Meeting of the American Medical Association, held at Atlantic City, N. J., June 5-8, 1900.

chiefly through the bowels and kidneys, and possibly to a certain extent through the skin. Nature usually begins this eliminative process by a diarrhea, as above stated. In accord with this idea, we should assist by as thorough a cleansing of the bowel as possible. The drugs on which we most rely for aid in this therapeutic endeavor are calomel and chlorin. As a germicide and purgative, calomel meets two important indications. It may be given in from 1/10 to 1/2 grain doses every half hour, as conditions may demand, until six or eight doses are taken. As soon as the bowels move because of the calomel, there should be a free washing out of the bowel with sterilized water, the effect of which may be improved by the addition of a dram of salt to a pint of water. This flushing will do much toward assisting nature, as well as contributing to the comfort of the patient. The course of the calomel, in varying doses according to the susceptibility of the patient to the drug, should be repeated every twenty-four to forty-eight hours. The wash should be repeated as often as the emergency demands, in proportion to the meteorism or bowel trouble. The antiseptic or germ-destroying property of chlorin has long been recognized as very powerful, while at the same time experience has amply proved that it is harmless to the animal economy. Then in addition to this cleansing effect of the calomel, and the washing, on the bowel and contents, we may give chlorin in aqueous solution and still nearer approach a condition of asepsis in the bowel and thus render it less inviting to the bacilli. My favorite way of preparing chlorin is that recommended by Dr. Yeo, with the exception of quinin, which I omit. Take potassium chlorate, grains 30, acid hydrochloric, minims 60, and distilled water 12 ounces. Put the potash in a dry bottle of sufficient size, add the acid, cork the bottle and allow it to stand until chemical action ceases, then add 3 or 4 ounces of the water at a time and agitate thoroughly. This is repeated until the preparation is complete. A tablespoonful is given to an adult every two hours until the offensive character, if such exists, of the evacuations is removed, then the interval is lengthened at night but continued in the day until convalescence is established. By this constantly lax condition of the bowels, the repeated washing out from below and the frequent imbibing of the chlorin solution serves to sufficiently free the bowel of the disturbing elements so that meteorism and its accompanying evils are in a great measure prevented. Autointoxication from this source is reduced to the minimum. So much then in the way of lessening, as well as the removal of a portion, of the products of infection which occur in the intestines. Professor Osler, at the meeting of THE ASSOCIATION at Baltimore, some five years ago, stated that "the only thing developed by this intestinal antisepsis is that the walls of the bowel could stand considerably more irritation and strain during typhoid fever than had been supposed." As revealed by the light of to-day that statement should be corrected as follows: Intestinal antisepsis, during typhoid fever, tends to protect and strengthen the walls of the bowel and to that extent is a preventive of extensive sloughing, hemorrhage or perforation.

In this connection, we next come to the consideration of hydrotherapy as an additional means of sustaining the vital forces, and promoting elimination of the toxic products through the kidneys and skin. In private practice the ideal hydrotherapy is by the sponge bath, hot and cold. Its practicability at once commends it to your intelligence. Any patient who with the aid of his family or friends is unable to carry out this modification of the Brand treatment should be sent to the hospital, where water and nurses are abundant. The familiar maxim, "the greater the skill the better the service," is true in this as well as other callings; for the sponge bath very little skill and usually one nurse will suffice. The free use of sterilized water internally should be maintained throughout the attack, and externally, as conditions may require. If the patient can not take it into his stomach, inject 16 to 20 ounces into the bowel at stated intervals and the effect will be almost the same. We might say he should be drenched internally and externally with water. Internally it acts as a solvent and carrier of the waste matter, to a degree, like flushing out the sewers of a city. It facilitates intestinal antisepsis, it feeds and soothes the famished and parched tissues, favors metabolism, and induces sleep, nature's great restorer. If we follow up this effect with the free use of water externally, hot and then cold, the first effect is the shock, the severity of which depends on the temperature of the water and the hyperesthetic condition of the patient. As a result of the reflex action produced on the nervous system, we have expansion of the lungs, increased elimination of carbon-dioxid, increased oxygenation of the blood, increased blood-pressure, and a consequent increased activity of the lymphatics and other glands, especially the kidneys, which means an increase in the excretion of the toxins in the fluids of the body, and for your patient a bright eye and a clear head. The cold pack or sponge bath does not cause so pronounced a reaction as does the cold plunge bath; neither is it so terrifying and hazardous to the patient. At periods during an attack of typhoid fever the temperature in the majority of cases runs high, so much so that the patient is distressed. The nervous tension is too great, causing extreme restlessness, and if the sponge bath does not relieve it we must resort either to the cold plunge bath or give an antipyretic. What shall we do? In many instances it would be impossible to use the cold bath, in others still, it would be more dangerous than the drug. In the hospital you might use the plunge bath, but in private practice I would give acetanilid, and in about thirty minutes the patient is quiet, the skin is bathed in perspiration and the temperature is coming down within reasonable bounds. Often we will have among our patients those who have rigors. One will complain of being cold, or the extremities are cold while his body is hot, and we find the circulation very rapid and a temperature ranging from 104 to 105.5. If you give him 3 or 4 grains of acetanilid and re-apply ice-cold applications to his head, usually in fifteen or twenty minutes he will begin to complain of burning up. Having experienced this ordeal I can state from personal knowledge that the sensation is one of extreme heat over the surface. But to the patient. In five or ten minutes longer you find him perspiring, the extremities warm, and he expresses himself as feeling comfortable. The exact way in which this effect is produced, I am not yet able to demonstrate, but from repeated observation I am sure that through the nervous system the acetanilid causes dilatation of the peripheral blood-vessels and thus allows the hot blood to flow from the congested parts to the surface, the cooling area. The radial pulsation is slower and shows greater volume. This allows rest for the overworked heart.

Much prejudice exists against the coal-tar derivatives as antipyretics. This prejudice exists in the minds of many of our most learned, but in not a few instances it is held by those who have had very little

if any personal experience with them as antipyretics. That they are remedies which should be used with great caution, there can be no question, but that they should be discarded because some have dared to use them recklessly and met with disaster, is not warranted. On the same plea we will strike most every remedy of value from our list.

Along the latter part of the year 1895, I began the treatment of typhoid patients with the view of destroying and removing the bacilli and their toxins in the manner described, believing it to be the rational way of assisting in the correction of the pathological conditions. Since that time seventy-seven typhoid patients have come under our care with the result that all of them recovered. I might say, were permitted to recover, because some advocate the idea that patients so treated, when they do recover do so in spite of the treatment. The youngest of these patients was 4 years of age, and the oldest 63 years. They represent the various callings and conditions in life, from abject poverty to that of plenty. Their nursing and feeding as a rule harmonized with the intelligence and ability of the nurse to carry out the instructions. Diet was restricted to liquids and semi-liquids. Fruit juices were served in liberal amounts if the patients desired them and they could be obtained. If they so desired, they were permitted to masticate and suck the juices of broiled steak. The duration varied from nineteen to sixty-five days, though the average time was only twenty-five and one-tenth days from date of onset to a continued normal temperature. Except when temperature was high they all remained rational. No preparation containing opium was used at any time, save in one case of severe hemorrhage. Hemorrhage occurred in six cases, though very slight in five of those. Ice over the bowels and an enema of cold water containing extract of witch hazel were all that was used to control the hemorrhage in these. In the other case the hemorrhage was so severe and repeated, tincture of opium was added to the injection of witch hazel and water. Aside from this case, no effort was made at any time to check the bowels except by cleansing. When there is diarrhea, a part of the expectant plan is to control that diarrhea by sedatives and astringents, the idea being to preserve the vitality of the patient.

By a comparison of my results with those obtained by others, while employing the expectant plan coupled with the sponge bath, it is found that the results secured by the bath and intestinal antisepsis are the more favorable. The conclusion is that it is a mistake to check a diarrhea in typhoid fever except by the use of a purgative or by a thorough washing with sterilized water. By this, many of the bacilli and their toxins are carried away by the dejecta. Results indicate that the chlorin solution has a very beneficial effect in checking the production of the toxins, or by rendering them less active. That the toxins are largely produced in the glands, lymphatic and others, is not proof positive that the chlorin does not come in contact with them there, to some extent. It is evident that it does, in some way, to a certain degree, destroy or render inert, either in the bowel or elsewhere, a sufficient amount of them to prevent their producing that profound toxicity formerly so common in the disease. It is not held, in the seventy-seven cases reported, that the chlorin was the sole agent in the prevention of the toxemia. The effect of the calomel with the flushing of the bowel, prepared the way or acted as a stepping-stone for the chlorin. The cold bath, through its effect on the nervous and cardiovascular systems, greatly increased the elimination of toxins through the kidneys. With the united effect of these remedial measures the patient is enabled to recover in a shorter period, and with a saving of vital force. In well-regulated hospitals where the patient is under the care of skilled nurses, and no imprudence in the diet could occur, and every detail as to treatment is faithfully adhered to, relapses would be rare and the course of the disease correspondingly shortened. We have the above statement, notwithstanding the reverse opinion is held by gentlemen of recognized and distinguished ability.

DISCUSSION.

DR. C. BIRNIE, Taneytown, Md.—My opinion is that the majority of cases result from the ingestion of contaminated water and not through breathing air. The patient and his surroundings should be kept clean and the excretions disinfected, so that neither air nor water be contaminated. I believe that typhoid fever is more easily treated where the bowels are loose. In talking with a prominent man, he told me that he prayed for constipation. I have never found that constipation was a thing to be desired in the treatment of this disease. I think that cool bathing is of great importance, but in country districts it is impossible to carry out the Brand method in all its details, and I can not agree with any statements made that we should treat typhoid fever antiseptically; I believe that this is impossible. Typhoid fever is a disease of the whole body and not of the intestinal tract alone. I disagree with the statements made regarding antiseptics; when we consider the canal, from the mouth to the anus, a twisting and turning canal, there is no known means by which we can antisepticize it. I think flushing the colon is useful, and I have known it to give relief to the flatus; for that it is good. There is a large number of cases that will get well under any reasonable line of treatment. Prescribe for the patient and not for the disease.

DR. A. E. ROUSSEL, Philadelphia—It has been within the last six weeks that I made a post-mortem on a patient of mine at the Howard Hospital, a young woman about 26 years of age, who had hardly any congestion of the intestinal tract; the most minute observations revealed no break of continuity of the tissues, yet the case responded to Widal's reaction and was evidently one of typhoid fever. How frequently do we see cases with marked meningeal symptoms due to the same cause! Therefore I consider the statements regarding the value of intestinal antiseptics as largely exaggerated. There has been a marked reduction in the mortality from the use of the Brand method. Where the entire treatment can not be carried out I believe that portable bath-tubs should be used. In those cases where a trained nurse can not be procured the application of the baths does not require a great range of intelligence; the member of the family acting as nurse should be taught how to take the temperature, and when the tubbing should be applied. I think the difficulties of applying the Brand treatment has been widely exaggerated. We know positively that before this method of treating these cases was in vogue the mortality ranged from 18 to 20 per cent., while now it runs from 5 to 10 or 11 per cent. I can not fully agree with the last speaker's remarks that those cases which show a mild degree of constipation are more severe and show a larger mortality. Dr. Wilson has had applied in the wards of the German Hospital the Woodbridge treatment, and among the 18 or 20 cases the results were far from being satisfactory. I think there were four or five deaths out of the above number of cases. I have tried many drugs and I have tried cold water, and the latter has proved by far the most efficacious. As regards the entrance of the germs into the system, I think it is undoubtedly in the vast majority of cases through the water-supply, so far as it has been demonstrated. But it is fair to assume that the germs may enter the system through one, or more than one channel.

DR. LOUIS FAUGERES BISHOP, New York City—I also wish to state that the antiseptic treatment of typhoid fever has brought nothing but disappointment. I have tried chlorin and other mixtures, and have been disappointed in all. Typhoid

fever is a general disease of the whole system and the intestinal tract is not the road through which we should treat it. The opinion of the whole medical world will support the Brand treatment. We should on every occasion preach and teach it. There is one practical point that is worthy of mention, i. e., that a tub is not necessary. In New York City in private practice we seldom use tubs any more. The nurses have learned how to arrange their patients in a rubber sheet, which answers just as well as a tub. Of course these baths are given by skilled and trained nurses. The tub is safer in unskilled hands. As to the merits of the Brand method, all are agreed that its chief merit lies in the support it gives to the circulation and the restoration of the nervous system, and that any reduction of temperature is a secondary matter, though, of course, important. When the patient gets a cold bath the effect is the same as it is in health; the respirations are deepened, the circulation is increased, the nervous system is wonderfully uplifted. It does not diminish the number of intestinal hemorrhages or perforations, but it certainly does not increase them.

DR. H. M. FUSSELL, Philadelphia—I am glad that I heard it mentioned that a modification of the Brand method can be used in private practice. After protecting the bed and floor with the rubber sheet, the water should be allowed to fall upon the patient from a height of from four to five inches above his body. I may have mistaken Dr. Peck's point in reference to antipyretics and I can not let his remarks go unchecked, because it is so much easier to give drugs than to give the baths. Antipyretics certainly reduce temperatures, but not in the same way as the cold bath does. I do not believe that intestinal antiseptics, given in a general way, do any good, but I have used in conjunction with the Brand treatment salol as a local measure. If there is a severe case of diarrhea, this is checked by this drug. I think we should depend upon cold water

DR. J. M. PECK, in closing—Evidently some of the gentlemen failed to hear or else misunderstood the ideas expressed in the paper. I did not intimate that typhoid fever is a local disease, but that in typhoid fever we may, and usually do, have in the intestinal tract a local manifestation of the disease. The view taken in the paper is in perfect accord with that of the bacteriologist and pathologist of to-day. The degree of toxemia depends on the amount of toxins, and their amount depends on the multiplicity of the typhoid bacilli; hence our contention that any means by which only a part of the bacilli are carried away or the intestinal tract rendered less inviting to, or less favorable to the production of, the bacilli is so much to the help of the patient. Our experience with cases in which a constantly lax condition of the bowels and free flushing of them with sterilized water and frequent ingestions of chlorin fully justifies our faith in the treatment. This kind of intestinal antisepsis combined with the external application of cold as suggested in the paper will yield better results in private practice than any other yet suggested. If those using the Brand method exclusively will add to it intestinal antisepsis they will improve on their already good results. I do not believe the intestinal tract can be made strictly aseptic, but am thoroughly convinced by clinical experience that the septic products may be so reduced that auto-infection and auto-intoxication are kept in comparatively safe limits. The objection raised that the chlorin is a nauseous dose is purely imaginary, since by the addition of aromatics the most fastidious may be pleased. To be sure, the coal-tar derivatives should be used with caution, and when so used the life of your patient is in no sense endangered thereby, but is actually safe-guarded. The fact that they are potent drugs should not cause us to discard them any more than should strychnia, belladonna and a host of other powerful, but exceedingly valuable remedies be discarded. I repeat that, with judicious use, there is no danger of, or excuse for, killing a patient with acetanilid.

Violation of Quarantine.—An eclectic practitioner of Appleton, Wis., who has achieved a somewhat unsavory notoriety by his recent flagrant violation of accepted health regulations, who escaped from quarantine at Appleton, and passed through Chicago to Terre Haute, Ind., was apprehended in Milwaukee, January 30, and sent to the isolation hospital there.

INFLUENZA, ACCOMPANIED BY FOUR DISTINCT PNEUMONIC ATTACKS.

OTITIS MEDIA PURULENTA AND CEREBRAL HYPEREMIA, COLITIS, INANITION—RECOVERY.

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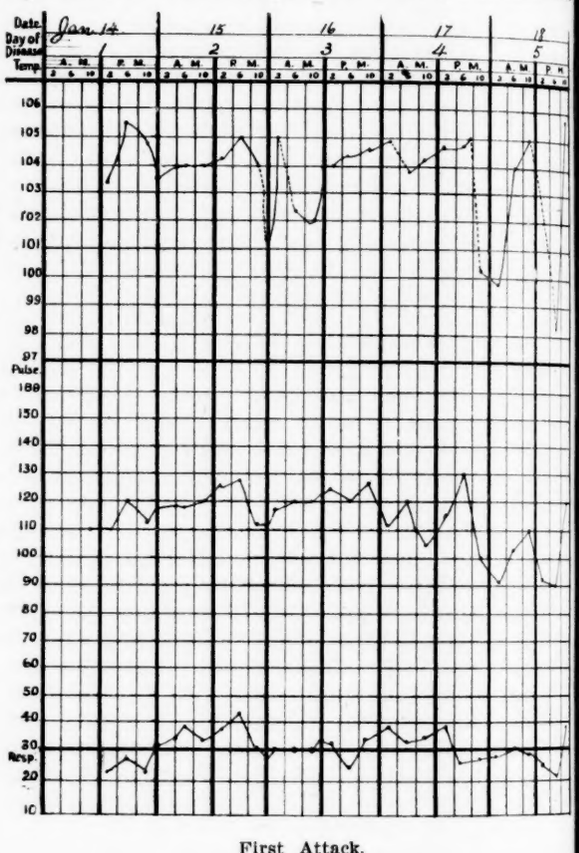
BUFFALO, N. Y.

As excuse for recital of this case may be given its very unusual course and happy termination in recovery.

Allen D., aged 23 months, suffered during last summer from a dysenteric diarrhea, for which he spent two months on a farm and ultimately recovered. Twelve days previous to the present illness, I treated this baby for parotitis. On January 12, when I called I found him irritable, with flushed countenance and considerable amount of dry cough; temperature 103.6; pulse 112; respiration 32. The tongue was coated, and there was



First Attack.

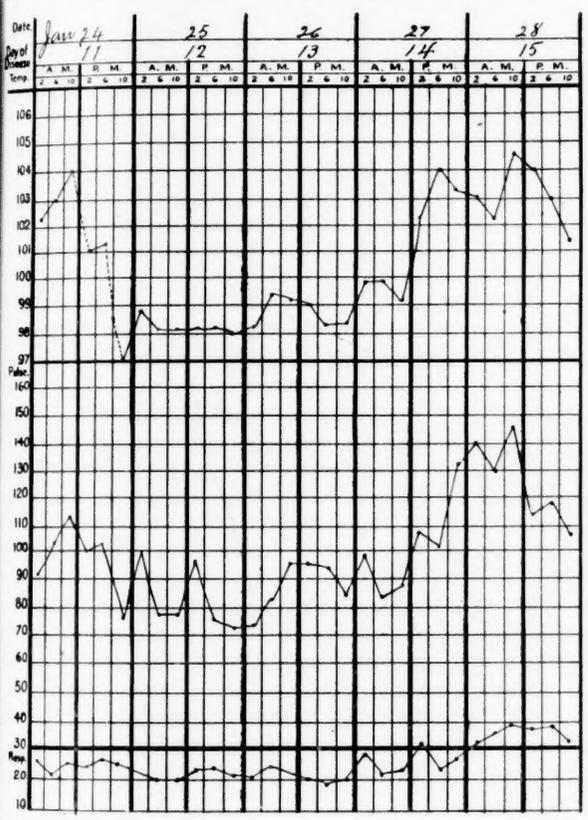
anorexia. The examination of the chest revealed by auscultation, subcrepitant râles, especially over both bases of the lung posteriorly. The onset was abrupt and the baby soon showed a marked apathy due to toxemia.

In the further discussion of the case I shall confine myself to the interesting and unusual temperature chart herewith presented.

The first attack of pneumonia, which was of a broncho-pneumonic type scattered with here and there very small areas of consolidation, was associated with a very high temperature-curve, reaching a maximum of 105.6 F. The respirations were as high as 42, and the pulse at one time reached 135. The lines, indicating the abrupt fall of the temperature, show the effect of cold sponges and packs.

* Presented to the Section on Practice of Medicine, at the Fifty-first Annual Meeting of the American Medical Association, held at Atlantic City, N. J., June 5-8, 1900.

The first temperature-curve dates from January 14 to 24, eleven days inclusive. On the 9th and the 10th there was a blueness of the lips; the respirations were shallow, the pulse feeble and frequent, and emesis appearing it became necessary to give nourishment and medication by enemata. The babe meanwhile, first apathetic, became comatose; the eyes strabismic, the legs and arms strongly flexed and rigid, the head retracted, and with Kernig's sign, it was thought a complicating meningitis developed, but fortunately this was in all probability due to the active cerebral hyperemia resulting from the hyperexia, for on January 24, the eleventh day, the temperature suddenly descended by crisis and the pulse and respirations were reduced to normal. It was thought that the babe had withstood a severe type of influenza pneumonia, but we were disappointed, for after two days of calm—twelfth and thirteenth—the temperature, pulse and respirations again abruptly rose; there was again developed a dry cough, and on examination of the chest there was found complete consolidation of the left upper lobe with crepitant râles and a distinct quality of bronchial breathing. The child meanwhile showed great prostration, with respirations frequently dyspneic and shallow, reaching 40. There was great restlessness and irritability and the baby acted as though in great pain. Because of the manner in which he would raise his hand to the face, our attention was directed to the examination of the ears, and a slight purulent discharge—otitis media purulenta—was noted from the right ear; this affection, after the usual treatment, improved in a few days so that the patient was less fretful and suffered less pain.

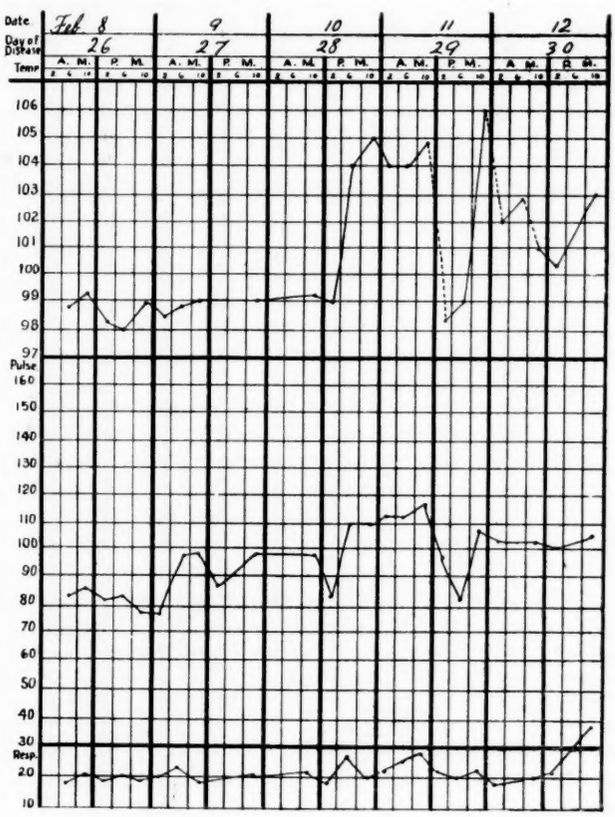


Second Attack.

The tongue was coated, well-marked tympanitis was present, and it was noticed that the dejecta contained quantities of mucus, so that it became necessary to institute high-bowel washes. This attack lasted from January 27 to 30—fourteenth and seventeenth days of disease—inclusive, when temperature, pulse and respirations again descended by crisis, reaching a subnormal point, 97. The pulse became stronger and less frequent, the respirations fuller and easier, and the patient perspired freely.

The babe, because of his inability to properly take and assimilate nourishment, was anemic and lost in strength and flesh, so that beginning with the second period of calm, inunctions of cod-liver oil were given daily. This second period of calm, during which the consolidation of the right lower lobe with crepitant râles appeared, was ten days in duration—January 31 until February 9, eighteenth and twenty-eighth days of disease.

On the afternoon of February 10, or twenty-eighth day, there occurred another abrupt rise of the temperature, and on examination of the chest, a new area of consolidation of the right lower lobe with crepitant râles and bronchial breathing was found; the left lower lobe gave by auscultation evidences of subcrepitant râles, but no consolidation.



Third Attack.

This attack, extending from the twenty-eighth to the thirty-fifth days, was especially severe, the chart reaching on the 13th at 10 p.m., temperature 106; pulse 128; respiration 42. The cheeks were flushed, suggestive of the hectic flush of phthisis. On the 16th there appeared a herpes labialis; there was cyanosis; the respirations were labored, shallow and cautious; the pulse was frequent, small and intermittent. There was anorexia and great irritability, the patient often refusing to swallow nourishment or medicine. Tympanites and tenesmus developed, and the dejecta showed large quantities of mucus. Again the arms and legs were often retained flexed and rigid and the head retracted. A great loss in weight and strength was noted during the attack.

On February 17 a crisis again occurred. The temperature remained normal for seven days inclusive.

On March 24, the forty-second day, there was another rise of the temperature, pulse and respirations; however, no such elevation was reached as in the previous attacks, for the reason that there was less reaction to the toxemia. The cough was dry and regularly paroxysmal. The lungs showed no consolidation, but subcrepitant râles and a bronchovesicular quality of breathing were detected over both bases, the left interscapular and mammary regions.

The colitis still continued and there was an anemia and emesis with great emaciation, the muscles becoming very much atrophied. The babe presented the appearance of inanition, and because of the continuity of fever, the hectic flush, the colitis, perspirations, the morning remissions of temperature, we were led to differentiate between influenza, malaria, remittent fever, tuberculosis and sepsis, i. e., empyema.

It was at this time a blood examination was undertaken by Dr. A. E. Woehnert, the report of which follows:

The hemoglobin was 50 per cent.; the erythrocytes numbered 3,500,000. There was a leucocytosis, but not of the polynuclear type, of 14,000. Lymphocytes, 97 per cent.; polynuclear leucocytes 3 per cent.; no eosinophiles, microcytes, poikilocytes. A picture of chloranemia or severe form of secondary anemia.

In the presence of leucocytosis we were justified in excluding a tuberculosis without cavity formation. A tuberculosis with secondary cavity formation could be excluded by, 1, the lack of physical signs; and 2, by absence of a polynuclear leucocytosis.

Empyema was excluded by physical signs, but in view of the fact that our patient appeared pyemic and that the temperature-curve reminds one of pus, and also because there are some cases, especially in infants and very young children, which give no absolute physical signs and which can only be positively diagnosed by exploratory puncture, the absence of polynuclear leucocytosis excluded it.

The blood examination, therefore, was of assistance in diagnosis in excluding the diseases enumerated above. The secondary anemia can be attributed to the toxic effects of the existing infection on the erythrocytes, causing a loss in the hemoglobin and their partial destruction. As to the increase in the lymphocytes, it was not sufficient to be attributable to a leukemia, and of this there were no nodular or splenic signs, otherwise than could be attributed to the existing inanition. Cabot regards an increase of a leucocytic count in infancy as made principally of lymphocytes, and this change is to be regarded as a mark of the arrest of the development or reversion to an earlier type of tissue. Unfortunately, we did not seek the influenza bacillus, but the prevalence of the disease sporadically at that time and the behavior and course of the history, especially considering the susceptibility of the patient after the attack of parotitis and the exclusion of the other diseases previously considered, left no doubt in my mind as to the diagnosis. The last edition of Ashby and Wright says the diagnosis often has to be made by process of exclusion and nature of epidemic prevailing.

It is interesting to note that we had: 1, an influenza bronchopneumonia scattered and in very small patches giving no definite areas of consolidation, but which showed the characteristic physical signs by auscultation; 2, that the second and third attacks were either, *a*, lobar consolidation in which the organism affected primarily the alveoli, such as is described in Frinkler's monograph on influenza, or, *b*, that the lobules quickly coalesced giving a lobar variety of bronchopneumonia, or, *c*, that there was added a complicating true diplococcus or streptococcus pneumoniæ producing characteristic consolidation.

Purulent otitis is a very frequent complication of influenza. It may appear during the course of the disease or convalescence. It may be produced by the influenza bacillus, but often is a secondary infection due to pyogenic bacteria. Every epidemic of influenza increases the quota of diseases of the ear, and this complication should be carefully sought for.

Lastly, the colitis may be regarded as belonging to the intestinal manifestations of the disease and probably produced by swallowing the sputum, and the condition of inanition becoming secondary to the intestinal lesions and long continuance of the infection which must have produced changes of an atrophic form in the secretory function of the intestinal tract.

In view of the bad prognosis in children of influenza complicated by pulmonary disease, the severity and multiplicity of the pneumonic attacks and the ultimate recovery are emphasized.

It is a year since I first saw the child and the recovery is absolute. The child has gained in strength and weight and the lungs and other organs are normal.

AURAL MANIFESTATIONS OF SYPHILIS.*

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PHILADELPHIA.

Among 2500 consecutive cases treated in the out-patient department for diseases of the ear of the Pennsylvania Hospital there have been but seven in which the trouble was distinctly of syphilitic origin. They were as follows:

CASE 1.—A man, white, aged 25, a musician, presented himself suffering from undoubted secondary syphilis. There was a very general squamous eruption, and he had lost a large amount of hair. He had a chancre seven months before. There were several large squamous syphilids on his right auricle. These healed completely after a course of mixed treatment, accompanied by the local application of calomel ointment.

CASE 2.—A woman, white, aged 27, with marked symptoms of tertiary syphilis, had been deaf in the left ear for four years, and had suddenly lost her hearing in the right ear four days before coming to the dispensary. She suffered also since the trouble in her right ear had begun from very severe vertigo. There was total loss of bone conduction. The diagnosis of syphilitic labyrinthine deafness was made, and under large doses of potassium iodid she speedily improved. She passed from under observation before her hearing was completely restored, but her rapid and steady improvement gave us reason to hope that she would have regained it if she had persisted in the treatment prescribed for her.

CASE 3.—A boy, white, aged 9 months. The mother said the child's father had syphilis. When brought to the dispensary it had a large gummatous mass, which had broken down and formed an abscess, involving the auricle and the tissues above and in front of it. There was much glandular enlargement in other parts

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of its body and it was very weak and miserable looking. The mother said it had had "the snuffles" since birth. The pus was evacuated, and under specific treatment the child improved rapidly.

CASE 4.—Boy, colored, aged 9 years. For one week previous to coming to dispensary he had complained of roaring in the ears and deafness. There was no pain and no discharge from the ears. The drums were intact, very slightly retracted. Aerial conduction was slight and bone conduction was lost. The boy was poorly nourished, had Hutchinson teeth, and enlargement of post-cervical lymphatic glands. Under specific treatment he began to improve, but soon ceased coming to the dispensary.

CASE 5.—A colored man, aged 25, bartender, suffered from secondary syphilis. Four weeks previous to coming to the hospital his right ear began to swell; the swelling was intensely painful. The man positively asserted that he had sustained no injury and there was no evidence of any previous injury or furuncle about the ear. He recovered completely on potassium iodid internally, with the local application of yellow oxid of mercury ointment to the ear. This case I have already reported.*

CASE 6.—A woman, white, aged 30, single, domestic. Twelve years ago she had an abscess in the frontal region, accompanied by much loss of frontal bone substance, leaving extensive depression and scarring over forehead. There was a large perforation through the bony portion of the nasal septum. Her hair was scanty and quite gray. Four years ago she had gone to bed one night with apparently perfect hearing, but when she awoke was hardly able to hear anything with the right ear, and in a few days became deaf in both. She is now under treatment for specific iritis. Examination showed membrane opaque and retracted. Both bone and aerial conduction of sound were totally lost.

CASE 7.—A woman, white, aged 55 years, mother of Case No. 6. She came with her daughter to the outpatient department and said she was "going deaf." Examination showed both drums very fibrous and opaque. In the right ear she was deaf to both aerial and bone conduction. No definite history could be obtained as to whether her deafness had been of sudden onset or otherwise. There was a large perforation through her bony septum. She denied with great vigor the possibility of syphilitic infections either of herself or her daughter, declaring that her husband had been a perfectly healthy man until his death from some acute disorder some years ago. She had no other evidences of syphilis than those narrated above.

I do not think that syphilis can be a very frequent source of ear disease, as if it were, there would surely be more frequent mention made of it, and yet when we realize how many of the patients who come to dispensaries are the victims of syphilis, in many cases not manifest on superficial examination, it is possible that sometimes syphilis as the underlying cause of their trouble may escape our notice. In the cases I report, the diagnosis was plain, but in going over the literature on the subject one is struck with the great variety of ear lesions which have been described as occasionally of syphilitic origin. It seems to me very probable that many seemingly most obstinate cases which do not yield to local treatment may possibly be due to syphilis and only awaiting proper constitutional treatment.

Knapp[1] quotes the following startling statement by Hinton: "Hereditary syphilis furnishes more than one-twentieth of all the aural patients at Guy's Hospital." Knapp says that this is certainly not a correct estimate as regards the frequency of such cases in other places.

* In Philadelphia Medical Journal, June 24, 1898.

EXTERNAL EAR.

Primary syphilis of the external ear is extremely rare. Politzer[2] refers to four cases. One was reported by C. Pellizzari[3] in which infection followed the use of a handkerchief that had been previously used by the syphilitic son of the patient. The second was reported by J. Zucker[4] as resulting "from the too fervent lovecaress of a publican." The third case was reported by Hermet[5] as occurring in a woman who was caressed by her syphilitic husband. The fourth case was related to Politzer by Hermet, and was a phagedenic chancre on the auricle and lobule following the bite of a syphilitic. Depres[6] reports a case of chancre of the auricle. L. Duncan Bulkley[7] in an analysis of 9058 extragenital chancres found 27 cases in which the chancre was located on the external ear. He reports one case occurring in a man whose ear was bitten by a man who had mucous patches in his mouth. Mracek[8] in a study of 400 cases of extragenital chancres found but 3 located on the external ear.

Secondary and tertiary manifestations of syphilis of the most varied character are described as occurring in the auricle and external auditory canal. Any of the ordinary cutaneous lesions of syphilis may involve the auricle and canal. Thus, one case I report was that of a man in whom a syphilitic skin-eruption of squamous nature had extended to the auricle. Knapp[9] reports a case of condylomata occurring in both external auditory canals in a woman who had contracted syphilis six months previously. He refers to a very similar case mentioned by Wilde in his "Practical Observations on Aural Surgery," and to the fact mentioned by Stöhr[10] that he had seen 14 cases of broad condylomata of the canals, 11 of which were in females. Also Noquet[11] refers to bilateral condylomata of the external auditory meati. M. A. Goldstein[12] reports an interesting case of bilateral syphilitic ulceration of the auricle in a colored man who had contracted syphilis six months before. G. W. Linthicum[13] also saw bilateral syphilitic ulcers of the auricle in a negro. C. D. Roy[14] reports a case of condylomata of the left external auditory meatus in a colored man who had secondary syphilis. R. Barclay[15] reports an interesting case in which syphilitic ulceration of the auricle resulted in sequestration of the cartilage of the concha and membranous atresia of the canal causing deafness, which was relieved by operation. H. Mendel[16] reports the case of a woman who eight months after contracting syphilis developed an intense cellulitis of the auricle. Würdemann[17] describes bilateral condylomata of the external auditory canals in a man who had had a chancre fifteen years before. A. H. Buck[18] saw three cases of syphilitic ulceration of the external auditory canal. Depres[6] in 1200 syphilitics observed condylomata of the external auditory meatus in five cases. Politzer[19] refers to a case seen by Lang, in whom there was a syphilitic papule in the position of the short process of the malleus in a woman with general syphilis. Politzer saw a characteristic syphilitic ulcer form on the inferior wall of the meatus in the course of a chronic suppurative otitis media. The patient had likewise pharyngeal syphilis. In another case he saw a syphilitic ulcer occupying the whole length of the cartilaginous wall of the meatus, accompanied by another syphilitic ulcer on the concha. The *Philadelphia Medical Journal* of March 4, 1899, contained a

paragraph stating that a case of gumma of the helix had been seen recently at the Ricord Hospital in Paris, and had excited much attention because of its rarity.

Hereditary syphilis of the ear manifests itself most frequently in the middle and inner ear. One of the cases I report in which the external ear was involved, however, was hereditary, namely, the gumma of the auricle in the child.

MIDDLE EAR.

Syphilitic disease of the middle ear most usually originates from infection through the medium of the Eustachian tube. Politzer says that Itard[20] described purulent inflammation of the middle ear following syphilis. He cites Ricord, Lancereaux, Blanchet, Fournier, Bonquoy, Laboulbène and Baratoux, as having observed "primary chancroid ulcers at the ost. pharyng. tubæ. They may occur as the result of catheterization."

Jonathan Hutchinson[21], in describing a number of cases of syphilitic disease of the ear, remarks that facial paralysis as a result of syphilitic disease of the ear, though less common than deafness from that source, is sometimes seen, and several of the cases he reports presented such paralysis. One of his cases of secondary syphilis lost his hearing simultaneously with the development of facial paralysis. He recovered from the palsy, but remained permanently deaf. Another case developed facial palsy accompanied by intense earache, but without any impairment of hearing. Hutchinson attributed the condition to syphilitic inflammation of the structures in the middle ear which did not extend to the external ear. Elsewhere[22] Hutchinson says that otorrhea is not a prominent symptom in syphilitic ear disease, adding, "I have never yet seen a case of profuse otorrhea attended with ulceration, growths of granulations, etc.—such as are common in cachectic or strumous children—in an heredito-syphilitic otitis. Hutchinson thinks that secondary syphilitic otitis is to be regarded as analogous to secondary syphilitic iritis, and that the lesions it creates are usually permanent. The deafness of tertiary syphilis, he says, is of less importance, and is usually temporary.

Woakes[23], on the other hand, observes that many cases of "so-called strumous otorrhea in children are due to an inherited taint (of syphilis)." He thinks syphilitic caries of the bone is frequently responsible for the long-continued suppuration.

Hereditary syphilis was considered by A. C. Cotton[24] as the causative factor in the case of a child of 15 months who had other undoubted evidences of the disease associated with chronic suppurative otitis media in both ears.

F. M. Wilson[25] publishes the aural history of an undoubtedly syphilitic family, in which, out of five living children, three had chronic suppurative otitis media. Dr. Wilson says that these cases may have been due to syphilitic disease of tympanum, or to lowered vitality, or else were merely coincidental.

Burnett[26] describes the interesting case of a man who went to bed with apparently normal hearing, but on arising found himself deaf in the right ear and suffering much from tinnitus in it. Examination revealed hearing normal in left ear, but hearing was lost to air conduction in the right ear, remaining normal, however, for bone conduction. There were evidences of syphilis in the throat. As there was no loss of bone conduction, although the deafness was of sudden onset, Burnett attributed the condition to the fact that granuloma, or circumscribed, small round-cell infiltration, had formed in the tympanum with great rapidity, and had by fixation prevented the normal movements of the conductive apparatus from being performed.

John Dunn[27] reports a case of exudation into the membrana tympani about the head of the malleus in a man who had manifestations of secondary syphilis. The membrane was punctured and under specific treatment the exudate disappeared. Dr. Dunn attributed the local condition to the constitutional disease.

INTERNAL EAR.

Of the cases which I report, four presented evidences of syphilitic disease of the internal ear. It is generally very late in the course of syphilis before lesions of the internal ear manifest themselves. Like almost every other subject in medicine, at one time much was said and written on the subject, but of late it has been allowed to drift into innocuous desuetude, not, however, I am convinced, because we know all there is to be known on the subject. The subjective symptoms are tinnitus and deafness, peculiar in that they are of sudden onset, especially the deafness. Hearing is generally lost in both ears, though frequently in but one. Unilateral facial paralysis is a not infrequent phenomenon.

S. Latimer Phillips[28] reports the case of a man who, three months subsequent to having chancre on his penis, became suddenly deaf and developed unilateral facial paralysis. In this case it would seem as though the facial nerve and the internal ear were simultaneously overwhelmed in a syphilitic catastrophe.

Syphilis of the labyrinth may occur in hereditary or acquired syphilis. Knapp[1], indeed, thinks that inherited syphilitic disease of the ear is characterized by the preponderance of labyrinthine symptoms over those of catarrhal inflammation of the middle ear. He reports several cases bearing out this view. He refers to the frequency with which syphilis of the brain or eyes is accompanied by aural syphilis.

Mygind,[29] in reporting a case of inherited syphilitic deafness in which ocular manifestations preceded those in the ear, likewise observes that this is frequently noticed in hereditary aural syphilis. The most frequent ocular lesions are keratitis, choroiditis, or iritis.

R. Barclay[30] reports the case of a girl of 12 years who had suffered from syphilitic eye trouble, and for over a year previous to being brought to him had been slightly deaf. Two weeks previous to coming to his office she had suddenly become practically entirely deaf. The child had Hutchinson teeth, and her father acknowledged having syphilis. Barclay says that aural syphilis usually becomes manifest shortly before puberty.

Buck[31] reports the case of a child with hereditary syphilis who lost its hearing in the course of three or four days. Subsequently the child developed syphilitic disease of the eye.

Crocker[32] reported three cases of syphilitic ear disease occurring during the secondary stage of acquired syphilis. All three cases presented very sudden and severe deafness, more or less vertigo and violent tinnitus occurring in persons previously free from ear trouble. He says that this complex of systems should always suggest syphilis, though the same group may sometimes be seen in rare cases of labyrinthine hemorrhage or tumor, and in cases occasionally seen in sudden fixations of the stapes. He mentions as very characteristic of syphilitic disease of the ear, present in these three cases, the following hearing tests: deafness for the watch and voice was marked, a tuning-fork of middle register was wholly lost to bone conduction, but fair for air conduction; the upper register, as shown by the

Galton whistle, was more or less diminished, while the lower limit remained unaltered. He attributes these cases to sudden effusion into the labyrinth, and thinks pilocarpin acts as a specific in them, when given in conjunction with mercury and potassium iodid.

Toeplitz[33] reports an interesting case of labyrinthine syphilis following pharyngeal syphilis and unaccompanied by any middle-ear lesion.

Theobald[34] saw a case of what he regarded as labyrinthine syphilis in which there were most remarkable variations in the hearing power, sometimes quite good, at other times almost nil. This has been noted as a feature of syphilitic deafness by several other observers.

G. A. Syme[35] reports two cases of acquired syphilis in which there was sudden loss of bone conduction, with staggering gait, and tinnitus, which showed marked improvement under large doses of potassium iodid. Buck long ago pointed out the fact that when the auditory nerve was involved it was usual to speak of affections as labryinthine syphilis, whereas as a matter of fact the auditory nerve may be involved before its entrance into the labyrinth.

Roosa[36] advanced the statement that the most frequent seat of the lesion causing sudden loss of hearing in syphilis was to be found in the conducting apparatus and not in the labyrinth. In a later paper[37] he reiterated his opinion, and gives the following conclusions regarding suddenly developed deafness in connection with syphilis: "1. Very great impairment of hearing occurring suddenly, and not to be explained by the conditions found in the auditory canal or middle ear, so far as we can examine them, and not relieved at once by mechanical treatment, whether occurring in the course of syphilis or not, probably depends upon a lesion in the labyrinth or in the auditory nerve. 2. Absolute or nearly absolute deafness, the inability to hear certain tones, are symptoms of either primary or secondary lesion of the labyrinth. 3. If the tuning-fork be heard very feebly or not at all when placed upon the skull, or if it is heard better through the air than when placed upon the bones, it is probable that there is disease of the labyrinth. 4. Syphilitic disease of the labyrinth, if vigorously attacked by means of mercury and iodid of potassium soon after the beginning of the disease, may often be alleviated and sometimes cured. 5. Pathological examinations of the labyrinth, although not numerous, have already demonstrated that changes may occur, which confirm the conclusions that have been formed from clinical investigation."

W. Downie[38] describes the lesions found at autopsy in a boy of 17 years, the victim of inherited syphilis. The boy had had syphilitic manifestations in the eyes. Deafness came on gradually for about six months, but total loss of hearing occurred very suddenly. At the post-mortem the external auditory meatus was normal, the membrana tympani thin and free from adhesions, and the malleus and incus in healthy condition. The stapes, however, was "incorporated with, or ossified to, the border of the foramen ovale, and so had become immovably fixed to the wall of the tympanum." The mucous membrane of the tympanum was normal. The internal auditory meatus at its inner extremity was of average normal caliber and both the auditory and facial nerves were healthy, but on tracing it outward at 1 cm. from the inner opening, the upper wall became suddenly thickened, encroaching on the canal, and at a farther distance of 3 mm. the canal was almost entirely obliterated. The vestibule was so greatly encroached upon as to make it doubtful whether any portion of this space remained. The cochlea was of average size, but the modiolus and lamina spiralis ossea were so thickened as to occupy an unusually large proportion of the cavity of the cochlea. Of the semicircular canals there was left only a trace of the external, the rest of this portion of the labyrinth being lost in an ivory-like mass of bone. This agrees with Burnett's[39] statement that the lesion in syphilitic disease of the labyrinth is a sclerosis of the petrous portion of the temporal bone, with ankylosis of the stapes in the oval window, accompanied by thickening of the periosteum of the vestibule and the footplate of the stapes, with hyperplasia and infiltration of small cells into the connective-tissue supports between the membranous structures in the labyrinth and the wall of the bony cavity containing them. The round-cell infiltration may be disseminated throughout the periosteum of the lamina spiralis ossea, the zona punctata and the organ of Corti.

Crockett,[32] in reporting some cases of suddenly acquired syphilitic deafness, says of the pathological conditions found, that we commonly find changes in the periosteum about the footplate of the stapes and the cochlea in the vicinity of the latter, and also degenerative tissue changes in the nerve-cells and blood-vessels of the cochlea. From clinical evidence he attributes the sudden deafness to effusion in the labyrinth.

J. Baratoux[40] records the results of 43 autopsies on infants and children suffering from inherited syphilis. In these he found syphilitic lesions of the middle ear in 27, of the labyrinth in 4, and of both middle ear and labyrinth in 12. When the middle ear and internal ear were both affected, without pus formation in the internal ear, there was vascular injection and cellular infiltration of the soft parts of the labyrinth, the ampullæ and semicircular canals, and instead of the normal liquid of the canals, the parts were bathed in a serosanguinolent fluid. When the internal ear alone was affected, the changes were more marked. The caliber of the vessels was diminished by cellular proliferation in their walls, and sometimes they were obliterated by fibrinous clots. In some instances the labyrinth was markedly congested and there were hemorrhagic areas on the membranous portion, thus proving that the internal ear may be the seat of hemorrhage in hereditary syphilis. From the therapeutic point of view, the only thing of real value is to push the constitutional treatment of the patient, varying between mercury, potassium iodid or the mixed treatment, according to the stage of the disease in which the patient is seen. At one time pilocarpin was highly lauded in syphilis of the internal ear. Risk[41] and others reported cases which had been benefited by its use. At present it is practically abandoned. Of course, if there is suppuration of the middle ear, or ulceration of the external auditory canal, local measures must be added to the specific treatment.

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PREVENTION OF INTRACRANIAL AND INTRAVENOUS COMPLICATIONS IN SUPPURATIVE DISEASES OF THE EAR.*

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The predominant task of modern otology has been the evolution of an efficient treatment for mastoiditis and its complications. Formerly, surgical interference with the mastoid region was regarded as a formidable undertaking. In these days, however, we are accustomed to reports of mastoid disease in which cerebral abscesses have been evacuated, thrombosed intracranial sinuses opened and obliterated, and the internal jugular vein removed. Such cases exemplify surgical achievements of the highest order. We must not be dazzled by them, however, for it is a fair question whether there should be any cases of otitic cerebral abscess, or of otitic sinus-thrombosis, or of otitic pyemia. It seems to me that such complications are preventable, or, at least, that they may be relegated to the category of rare occurrences. The following observations are submitted as a contribution to the discussion of the ways and means by which the supervention of these complications may be obviated.

Clinically, every otorrhea should be regarded as a consequence of invasion of the chambers of the middle ear by infective micro-organisms. It is the most obvious and persistent sign of local infection. In thinking of the middle ear, most of us are apt to fix our attention upon the tympanum. But we should remember that the antrum and the cells of the mastoid process are also component parts of the middle ear. It is inconceivable that an inflammatory process, either acute or chronic, should be limited to the drum. It is not to be supposed that the tympanum may be inflamed, while the antrum, lying adjacent, and having the same vascular supply, and the same innervation, and a lining membrane of the same nature, remains unscathed by the disease. Moreover, it is highly probable that the mastoid cells are more often invaded than we are accustomed to believe. These things being true, it is evident that we must search for the sources of an otorrhea, not only in the drum, but also in the antrum, and in the cells of the mastoid process.

Gross inspection of the parts involved in suppurative diseases of the ear shows the lining membrane of the tympanum, antrum and mastoid cells engorged with blood, swollen and softened, in the acute stages, and converted into fungous granulation tissue in the advanced stages of the disease. The underlying bone is inflamed; it is commonly in a state of caries. The changes in the mucous membrane and in the bony walls may present every degree of intensity, and every stage of progress. Pus-formation may be marked, or it may be insignificant. Cholesteatomatous masses are often present in the chronic cases. Almost without exception, the first outlet for the discharges is by the auditory canal through the ruptured membrana tympani. The disease may spread, notwithstanding such drainage, however free, to the intracranial as well as to the extracranial structures. It may extend in two ways: 1, by erosion of bone in continuity; and 2, by escape of the infectious agent from the middle ear through the blood-vessels, or by the apertures in the bones, or through the lymphatics. The bone separating the chambers of the middle ear from the cranial cavity, or from the external world, need not be deeply eroded.

Every one who has critically examined the chambers of the ear in the various stages of chronic purulent otitis media must be convinced of two things: 1, the doubtful probability that advanced disease may be permanently controlled by treatment through the external auditory canal; and 2, the eminent desirability of a permanent eradication of the infective inflammation.

Experience demonstrates that if we wish to prevent the spread of infection from the middle ear to the intracranial regions, the conditions on which the otorrhea depends must be removed. After extension of the infection has occurred, it is generally agreed that operative interference should be undertaken. Also, when swelling with fluctuation develops behind the auricle, no physician would object to an operation. But in the absence of those reasons for operating, which even the uninstructed are able to appreciate, it is customary to recommend palliative measures, rather than resort to means which will permanently remove the focus of inflammation. Although in certain recognizable cases the simpler means will succeed, it is not good judgment to favor a prolonged trial of any method of treatment that is not producing palpable results.

In the majority of cases the objective symptoms will guide us aright in deciding upon the prophylactic operation. I shall ask you to consider, *seriatim,* seven objective indications for the mastoid operation, which may be recognized by the general practitioner.

1. Bulging of Shrapnell's Membrane, with Swelling of the Inner Extremity of the Auditory Canal.—The upper posterior quadrant of the membrana tympani is known as Shrapnell's membrane. Whenever, in purulent otitis media, it bulges into the auditory canal, and especially if swelling at the inner extremity of that canal be associated with it, we may assume that the mastoid antrum is seriously involved, and that the radical operation will probably be necessary to the patient's recovery. It is generally agreed that a free incision should be made through the drum-head in every case. Too great faith may be based on that treatment. The pus is always thick and tenacious, and it may not flow readily, even through a large aperture. Retention of pus in the ear can not be regarded too seriously; and, whenever incision of the drum-head fails to establish efficient drainage, it will be more prudent to open the mastoid antrum at once, rather than subject the patient to the dangers of delay. Those dangers are especially great in diphtheria, scarlet fever and influenza.

* Read before the New York County Medical Association, April 16, 1900.

The following history of a case will illustrate some of the prominent features of acute purulent otitis media:

M. O., 29 years of age, consulted me in February, 1899, for inflammation in his nose and throat. He had never had trouble with either ear. There was marked chronic dilatation of the submucous blood-vessels over both inferior turbinated bones; enormous posterior turbinal hypertrophies were present; and his entire pharynx was subacutely inflamed. About two weeks later, he had an attack of acute purulent otitis media in his left ear. Swelling at the inner extremity of the external auditory canal occurred early. The drum-head ruptured spontaneously before he returned to the dispensary with the ear inflamed. After ten days' treatment as an out-door patient, he was admitted to the Metropolitan Throat Hospital, where he remained about a week. The ear having improved, he was permitted to resume his indoor work. The inflammation relapsed almost immediately, and he was readmitted to the hospital on March 21, 1899, suffering from very severe pain in the ear. The mastoid process and the upper portion of the sternocleidomastoid muscle were very tender. The discharge from his ear had diminished, and he had had two mild chills. His temperature was 100. His general appearance was that of great suffering.

On March 22, assisted by Drs. C. J. Strong and E. M. Alger, I opened the mastoid cells, and established communication with the tympanum through the antrum. Pus was found in the inferior cells especially. The diseased mucous membrane and bone having been removed, the entire region was thoroughly disinfected and dressed antiseptically.

On the eighth day, the first redressing was made. There had been no discharge from the wound, or from the ear; and the wound was apparently healed throughout. On the eleventh day, the wound was perfectly healed, the ear was perfectly dry, and the dressings were removed permanently. On April 16, the ear had not discharged since the operation; the scar over the mastoid was normal; and the hearing for the watch, in the operated ear, was 10/30.

Since then, his ear has not troubled him, and the hearing remains as acute as in April. I removed, as soon as possible, the posterior turbinal hypertrophies, and reduced the inflammation in his nose and throat. I saw him in January, 1900, and up to that time the ear had not relapsed.

The result of operation in this case was not an extraordinarily fortunate one. Similar results may be attained with regularity, provided that the operation be thoroughly done, the parts thoroughly disinfected and properly dressed, each time with complete antiseptic precautions, for chance cuts no figure in the healing of wounds made for the relief of pyogenic infective diseases.

Two cases of acute purulent otitis media, in which no operation was undertaken, made a profound impression on me some years ago. Both patients were in vigorous health until attacked by the aural inflammation. Both were exposed to cold after the disease had been running about ten days. One developed typhoid symptoms immediately and died, it was said, of typhoid fever. The other died suddenly on the morning of the day appointed for the mastoid operation. Both lives could have been saved by different management.

In the case of M. O., exposure to cold and fatigue had an evil effect on the otitis. But my previous experiences with similar cases that had not been exposed to cold or fatigue were not very different. Many such might be cited in which bulging of Shrapnell's membrane and swelling at the tympanic ring occurred early, which were treated by the most approved non-operative means advocated by the recognized authorities, but without satisfactory result, and in which, after unnecessary delay and loss of strength, the radical operation became essential to the patient's recovery. In the light of these confessions, it must be evident that I have been conservative in accepting the teachings of experience. But it is plain to me now that the earlier the diseased regions are opened and disinfected, the more speedily will the cure be wrought, and the more safely.

2. Persistent Tenderness over the Mastoid Process.—Persistent tenderness over the mastoid process is a symptom of an otitis having important proportions. It is an indication for the radical operation, in both acute and chronic otitis media. In some such cases we find very little pus. There are otologists who object to a mastoid operation unless one may be confident of finding pus. If by that they mean to imply that there must be more than a few drops of pus in the antrum before they will consent to operate, I can not agree with them. As before stated, we find in purulent otitis media the mucous membrane of the middle ear in a state of fungous granulation, and we find caries of the bony walls of the middle ear. Both of these pathological conditions are incited by infective micro-organisms; and in both the existence of pus may not be very evident on cursory examination. Nevertheless, in order to cure such states of mucous membrane, and to check the progress of the caries, and to remove the infective organisms from the chamber of the middle ear, an operation that penetrates to and eradicates all of the disease must be undertaken. We should not expect other measures to succeed. Our duty to operate, therefore, is quite as great before an abscess has formed as it is afterward.

3. Swelling of the Soft Parts over the Mastoid Process.—The mastoid antrum should be opened in suppuration of the ear whenever swelling of the tissues over the mastoid process is observed. In a certain percentage of cases, incision and drainage of the superficial abscess is followed by recovery. This fact makes it less easy to convince an important body of general practitioners that it is not sufficiently effective. Ten years ago I was willing to handle certain cases in that way. Some of the patients were restored to health after a longer or a shorter period; but in a number of them the radical operation had to be done before the patient could recover. Among those cases of imperfect primary operation was one in which the sequel was disastrous; for my patient subsequently developed a cerebellar abscess, from which he perished. The intracranial complication did not arise until nearly two years after the first operation; but it is certain that had a radical operation been done in the beginning he would not have died as he did.

Mastoid abscesses are due to the spread of infection from the antrum and cells. In order that the infectious agent may reach the periosteum, the intervening bone need not be carious, for it may pass to the exterior through the veins, or the pores in the bone, or the masto-squamous suture. When an aperture through the external table of the mastoid is found, it should never be assumed that further operative interference may be omitted. And, also, when the external table of the mastoid process appears to be in good condition in these cases, we must never imagine that a thorough operation is not essential.

Swelling of the soft parts over the mastoid process, without abscess, is also an indication for an early operation. Such swelling may be dissipated, in certain instances, by non-operative means; but it is not probable that the infective agent may be driven from the field in that way. It is especially important that the radical operation be performed early in cases of chronic suppuration of the ear with swelling over the mastoid. Subsidence of the swelling in such cases can never signify that an adequate impression has been made on the dis-

ease, unless the improvement has been brought about by measures that are distinctly more effective than the usual local treatment.

4. Granulations and Fistulæ in the External Auditory Canal.—Granulations and fistulæ in the auditory canal external to the drum-head are indicative of caries in the walls of the middle ear. The discharge in these cases is more or less offensive. The extent of the carious process is not indicated by the objective, much less by the subjective symptoms. And no variety of treatment less heroic than a thorough mastoid operation offers any prospect of recovery. The following history of a case of this sort illustrates the various points commonly observed:

G. F., 9 years of age, was brought to me on account of a chronic offensive discharge from her left ear. The first purulent discharge from the ear occurred when she was seventeen months old. In 1893, she was operated on at the Manhattan Eye and Ear Hospital, and some dead bone removed through the auditory canal, I suppose, for there was no scar over the mastoid. She was under treatment until 1896. The ear had discharged offensive pus for one year when she was brought to me. For a considerable period, her general health had been poor; she was listless, and complained of frontal headache. The ear was discharging freely; and from the upper wall of the auditory canal near the drum-head projected a large granulation. There was neither swelling nor tenderness over the mastoid. At this examination in December, 1899, a large adenoid was removed from her nasopharynx.

A few days later, I attempted to anesthetize this patient; but, owing to her feeble condition, the unavoidable presence of food in her stomach, marked irritation of the bronchial tubes produced by the ether, and the subsequent depressant action of the chloroform, which was finally substituted for the ether, the child's symptoms became so alarming that I was compelled to postpone the work on her ear until another time.

During the following month, she was given iodid of iron and nux vomica. On January 10, 1900, assisted by Drs. C. J. Strong and M. C. Twitchell, and in the presence of Prof. E. D. Fisher, the patient was chloroformed, and I opened the mastoid antrum, which was found under about 1 centimeter of firm bone. There was a small quantity of pus in the antrum; the mucous membrane of the various chambers of the middle ear was in an advanced state of fungous granulation, and the walls of the antrum and cells were carious. Quite an extensive excavation was required to eradicate all of the disease. Very large granulations were removed from the tympanum. The malleus was extracted, and I intended to remove the incus, but it was missing. Nearly all of the posterior wall of the auditory canal was removed, and it was necessary to use the curette freely on the superior wall of the canal. I did not find that the roof of either the tympanum or the antrum had become carious. Finally, the entire region was thoroughly disinfected and dressed antiseptically.

Dr. Strong made all the subsequent dressings, and I did not see the patient again until five weeks after the operation. Then I found the wound entirely healed and the ear dry. The general condition of the child had improved greatly. My object in referring to this case is especially to show how dangerously extensive the middle-ear diseases may be, and yet give rise only to symptoms that are commonly regarded as insignificant.

5. Persistent and Relapsing Fistulæ behind the Auricle.—Persistent and relapsing fistulæ behind the auricle should be cured by a radical operation. They point to the existence of caries of the walls, and an infected state of the mucous lining of the tympanum, antrum and cells. Fistulæ that discharge for a time and close for a period are perhaps more likely to be followed by sinus-thrombosis, or some other intracranial mischief of a dangerous character than are others that remain open continuously. The indications for early operation seem clear.

6. Persistent, and Especially Offensive, Otorrhea.—Persistent and relapsing otorrhea, especially if offensive, ought to be checked by thorough removal of the underlying infective condition in the middle ear. Failure to cure otorrhea by radical operation will be observed rarely, if the work be done thoroughly, and if the wound be kept surgically clean until complete healing has taken place. There may be cases of purulent otitis media that are incurable. There are cases that will not yield to one operation, because all of the disease and all of the infective material may not be removed at the first attempt. The cases that prove to be incurable, and those that prove to be difficult, are either cases in which the infection has eaten its way slowly along for years without any very marked outbreaks, like a smouldering fire in the forest, or they are cases in which the infection is intense, and the attendant indifferent to the dangers of delaying operative interference.

In the winter of 1898, Dr. W. N. Platt, of Shoreham, Vt., sent me a patient who had been under treatment for insane delusions at the State Asylum at Waterbury, Vt. She had a chronic otorrhea, which the doctor conjectured might have had some etiological bearing upon her mental state. The only local symptoms existent when I saw her were a purulent discharge from the ear and slight tenderness over the mastoid process. I operated on her at the Mary Fletcher Hospital, at Burlington, Vt. I found the usual degeneration of the mucous membrane of the chambers of the middle ear. The patient made a satisfactory recovery from this operation, and then her ovaries were removed. The combined results of these operations were good in every way; but inasmuch as the laparotomy succeeded my work so shortly, the psychological value of the operation on the ear was necessarily obscured. However, it is interesting to know that the result obtained was not fugacious. Under date of Feb. 24, 1900, Dr. Platt wrote me as follows: "I had a report from the patient that you operated on for disease of the antrum and cells, last September. At that time, both her mental and physical conditions were good—the normal psychical life perfectly adjusted."

I have referred to this case especially because, so far as I know, the chief reason for removing the disease from the ear, namely, to restore the function of the mind, was unique.

Influenced more or less by the outcome of this case, Dr. George S. Bidwell, of Waterbury, Vt., formerly assistant physician in the state asylum, referred Mrs. Charles H. N. to me for a similar operation. I operated on her at the same hospital in the summer of 1898. The same local symptoms were present as in the other case, and I found in the chambers of the middle ear similar pathological conditions. Under date of Feb. 21, 1900, Dr. Bidwell wrote me as follows respecting this patient: "She had never been adjudged insane, and when she came to you she was able to preside over her children and household. At the time she came, she complained of a strange feeling in her head—that is a term often used by melancholic and maniacal patients in the incipient stages—and confusion of ideas. This confusion was so marked that she was hindered in her household duties. She was annoyed by, and complained of, it. I did not like these prodromes. The otorrhea offered no clue. You restored her. What might have developed in her case we can only conjecture. I firmly believe more serious mental disturbances might have supervened. All abnormal mental disturbances above re-

ferred to were relieved by the operation, and four weeks ago she was well, in good spirits, and happy."

It has been suggested that persistent offensive otorrhea should be treated by removal of the malleus and the incus. That is very good as far as it goes. The fact is, however, that if we confine our attention to so narrow a view of the pathology of mastoid disease, we shall fail to relieve many patients who may have caries of the ossicles, but who have at the same time that which is more important, namely, caries of the walls of the antrum and cells. There can be no reasonable doubt that the malleus and the incus should be removed in a certain number of cases of chronic otorrhea, but, as a rule, their removal should be a step only in the radical mastoid operation.

7. *Sudden Marked Diminution, or Absolute Cessation,* of a chronic otorrhea is a symptom of great significance. It should be regarded as the signal that the infection has attacked, or is about to attack, a vulnerable part. It is a command to operate in the most thorough manner, with the least possible delay. In such cases the sigmoid sinus ought always to be explored.

THE RADICAL MASTOID OPERATION.

Macewen, in his classical treatise on "Pyogenic Infective Diseases of the Brain and Spinal Cord," has discussed the radical mastoid operation in the most satisfactory manner. Experience in the operating-room and at the dead-house has demonstrated beyond a doubt, to my mind, that his advice respecting the operative management of mastoiditis and its complications is perfectly trustworthy. It would be impossible for me to add anything thereto. But it will not be amiss to refer to the fact, so frequently forgotten, that the object of the mastoid operation is not to drain the inflamed chambers of the middle ear. The object of the operation is to remove the disease. After that has been accomplished there will be nothing to drain away. In the class of cases under consideration, it is necessary to remove the disease from every recess to which it has penetrated. Not only should the antrum and the cells be freed of the infection, but the tympanum should always be thoroughly curetted, and the malleus and the incus should be removed when they are in a state of caries. Sufficient bone must be cut away to give the operator an opportunity to ascertain the precise condition of the various parts. Objection may be raised against this doctrine on the supposition that such radical invasion of the middle ear will prove disastrous to its function. So far as may be compatible with the well-being of the patient, I agree that the integrity of the ear should be conserved. But the handling which I have advised for the tympanum, however rough it may appear to be, does not necessarily injure the hearing. Whenever the ossicles are so diseased that they must be removed, we shall find that the function of the ear had been destroyed some time before that operation was undertaken. Repeatedly have I demonstrated the fact that the most thorough curetting of the middle ear is not incompatible with the preservation of acute hearing. The following history of a case upon which I made that operation twice within the year is apropos.

H. W., 14 years of age, was seen in consultation with Dr. R. N. Disbrow, on Feb. 21, 1899. During the two years preceding, he had had recurrent attacks of suppuration in his left ear. The discharge had ceased each time after a little, and had never been accompanied by much pain. On February 12, the discharge recurred, and the ear was painful. On the 19th he consulted his physician. On the 20th, he had a chill and his temperature rose to 104. I saw him in the afternoon of the next day. There was some purulent discharge from the left ear; the external auditory canal was free; there was a small perforation through the drum-head, and marked bulging of Shrapnell's membrane. There was no swelling over the mastoid, nor was there tenderness excepting over the knee of the sigmoid sinus. The internal jugular vein was not involved. Mental hebetude and photophobia were well marked. The patient was chloroformed, and I made a free incision through the membrana tympani, but did not evacuate much pus. After the incision had been made, a well-marked transient spasm of the left side of his face, especially about the lips, was noted. On Feb. 22, 1899, assisted by Drs. Disbrow, Booth, and E. M. Alger, I opened the mastoid antrum. It contained pus and fungous granulations, as did also the tympanum. The tympanum and the antrum were curetted very thoroughly, until I was satisfied that all of the disease had been removed. While curetting the aditus, twitching of the same side of the face was observed once. Following up the disease, I was lead to open the sigmoid groove at the knee, and evacuated thereby about two drams of foul-smelling pus.

Ophthalmoscopic examination immediately prior to the operation showed the media clear and the fundus normal in each eye.

I did not see the patient again until Oct. 27, 1899, when his father brought him to my office, having already visited the Eye and Ear Infirmary, where he had been advised very properly that another operation was necessary. I found the ear discharging pus, and there was a fistulous tract opening at the upper end of the mastoid scar and leading down to the antrum. The wound had become infected, and had never healed.

On Oct. 30, 1899, at the Metropolitan Throat Hospital, assisted by Drs. C. J. Strong and John Drew, and in the presence of Dr. E. M. Alger and others, I operated again on this patient. The antrum and the tympanum were full of granulation tissue and cholesteatomatous masses. Very thorough curettage of the tympanum and antrum cleared away all of the disease. The only invasion of the bone consisted in a small spot of caries in the lower portion of the mastoid process.

On November 2, I redressed the wound, and removed a large adenoid from his throat. On December 2, all dressings were permanently removed. There was a large polypus projecting from an aperture in the drum-head. By December 6 the last vestige of the polypus had been destroyed. About December 20 he was discharged cured. There had been no discharge from the ear since the polypus had been exterminated. The hearing for the watch in the left ear, the tympanum of which had been curetted twice within the year, was normal, or for my watch, 30/30.

The dangers incident to the radical operation on the mastoid in uncomplicated infectious diseases of the middle ear have been grossly exaggerated. Irregularities in the anatomy of that region have been supposed to be common enough to endanger the important closely adjacent parts, and even the patient's life, during the operation. Such suppositions are purely fanciful. It is true that the operator may wander from the course which he should follow; but it is futile to ascribe the error to an alleged anatomical peculiarity of the patient. Moreover, even after thorough eradication of the infective process, the most radical antiseptic measures are essential. Efforts to secure and to maintain thorough disinfection of all the parts involved must not be relaxed until the wound has healed perfectly.

In conclusion, permit me to remind you of the importance of diseases of the nose and throat as predisposing causes of suppurative diseases of the ear. The existence of hyperplasia of the lymphoid tissue in the vault of the pharynx tends to provoke acute suppuration in the middle ear, and provides a condition favorable to recurrences of the attack. Attention has been directed to this fact by numerous writers, but the lesson has not been learned even by many who are pretentious of be-

ing known as specialists in otology. Among close observers there can be no doubt that, in patients under 15 years of age, an adenoid exists in almost every case of suppuration of the ear. To have any etiological bearing, however, it must promote a chronic congestion of the nasopharynx. In order to serve that purpose, the growth need not be very large, although the greater the adenoid, the more likely will it be to cause trouble in the ears.

Associated with adenoid growths, we commonly encounter a hypertrophy of the faucial tonsils. At the same time, a hypertrophic rhinitis, in which chronic dilatation of the submucous veins of the inferior turbinal body plays the chief rôle, is the prevailing obstruction in the nasal passages.

Posterior turbinal hypertrophies, likewise, obstruct respiration through the nose, and they, too, should be enumerated among the predisposing causes of purulent otitis media.

In view of these facts, it must be obvious to all that rectification of abnormal states of the nose and throat is an indispensable preliminary to the prophylaxis of intracranial and intravenous complications of infectious pyogenic diseases of the ear.

[For Discussion, see THE JOURNAL, xxxiv, p. 1263.]

58 West Fortieth Street.

THE CEREBRAL NEURONS IN RELATION TO MEMORY AND ELECTRICITY.*

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OTTAWA, CANADA.

Professor Heger,[1] of Brussels, gives an account of experiments made on animals to determine the conditions of the brain cells, during various conditions of rest and stimulation, and concludes that "an important property of the cerebral nerve cell is its variability in reaction as regards its cell body, its processes, and its epidendritic granules. Changes in all three portions may co-exist or occur separately under different conditions, the further significance of which is important, and demands investigation." The nervous system reduced to its initial stage may be represented by two elements, a nerve cell, and a conducting tube, and it is the association of these two elements, which constitutes nerve centers and nerves. *Punch* tritely remarked, "What is matter never mind, what is mind, that's the matter." Although no relation of identity or analogy subsists, between mind and matter, a close relationship may be shown to exist between mind and force, or between mind force and nerve force. Undoubtedly mental activity may be excited by nerve force, and such is found to be the case in every act in which the mind is excited through the instrumentality of sensorium. The will can develop nerve force, and as a nerve force, can develop mental activity. There is in fact, a correlation between these two forces, fully as intimate as that which exists between nerve force and electricity. Maudsley is of opinion, there is memory in every nerve-cell, and indeed in every organic element of the body. The organic registration of the results of impressions upon our nervous centers, by which memory is established, is after all the very basis of mental life, and the cells and nervous tubes, associated in many ways, constitute the nervous system in its entirety. As life progresses tissue formation changes materially, and we gradually observe the outward as well as the inward manifestations of declining activity. Such is observed in the loss of hair, and the bald scalp, in the decay of teeth and consequent defective power of mastication, so also in the defective auditory process, as well as in gradually impaired vision and memory. Such evidences are undoubted in their character, and positive proof, should such be wanting, of an abnormal decline in systemic power, coincident with advancing years. While these systemic evidences of change are in progress, it is reasonable to infer that nerves and nerve centers, the very motive power of the entire system, should also participate in some degree in those structural modifications, indicative of molecular change, and impaired functional activity. Recent discoveries in the line of nerve-tissue formation, have defined small cellular almost rod-shaped bodies, as components of cell nervous tissue, known as neurons, which take an important place in the elimination of nerve power, and contributing to the production of normal functional activity. One of the most interesting developments recently announced in Germany, France and America, is that nerve cells were capable of movement, to such an extent as to actually alter their original relationship one to the other. In 1890, Wiederschein, a German physiologist, saw in the Leptodara Hyalina, an invertebrate, one of the entomostraca, the nerve cells of the esophageal ganglion move in a slow flowing fashion. This altered relationship almost molecular in character, may give a clue to a lessened functional activity and constitute the basis on which retardation rests. This constitutes the field of action, as to the therapeutic power of the electric current, which, as a known force, is still in its infancy. At the convention of the American Electro-therapeutic Association,[2] it was stated that static electricity causes contraction of the protoplasm, both animal and vegetable, excites nerve fibers, nerve centers, and nerve cells, to functional action, and to produce their separate effects, motor, sensory, secretory, sympathetic and vasomotor. The recent observation of Professor Herdman,[3] of the University of Michigan, is as follows: "That whenever a current of electricity traverses an animal body, the magnetic field resulting from the current and surrounding its path, must disturb in some manner the molecular and atomic activities that are going on in the tissues and fluids, through which the current of electricity passes, in fact, in such a manner as to rotate in some degree every molecule, so as to make it assume a different position from what it would if not thus acted upon," and draws the deduction, "that alternating magnetic stress is in some way related to quickened metabolism of tissue; that the magnetic energy goes through some sort of transformation, and reappears as physiological energy." During the past few years, in noting the results of failing nerve power, as indicated by functional inactivity, in tissues and organs generally, I have been more and more impressed with the vast importance of a thoroughly established balance of power in each structure of the human body and particularly with reference to the nervous system. In the examination, no organ should be passed over casually, or even section of the body, as difficulties creep up almost silently and diseased conditions become established prior to particularly marked external indications of importance defining the same. The brain is the battery of the body and as diversified in its peculiarities and manifestations as the facial expression of the Genus Homo, no two of the entire human species being exactly alike. In the examination of

* Read before the Royal Society of Canada, May 30, 1900.

1. British Medical Journal, May 27, 1899.
2. The Times and Register, Dec. 29, 1894.
3. Electricity, April 18, 1900.

nerve power by electro-neurotone currents. I noted on several occasions after a few weeks' application quite a change in intellectual activity, as evidenced by improved memory. The currents were passed through the base of brain chiefly, by applications to the parotid regions on either side of the neck, and in the most casual manner, not in the least anticipating this practical result. The individuals operated on were over 60 years of age, and the improvement of memory was of such a character as in my humble opinion to be worthy of the closest scientific inquiry.

REPORT OF TWO CASES OF AFEBRILE TYPHOID.

CHAS. J. WHALEN, M.D., LL.B.,
CHICAGO.

I presume no one thing has aided us so much in the diagnosis of typhoid fever as the temperature chart. Since the use of the clinical thermometer the temperature has come to be the indication for diagnosis, treatment and prognosis. All the old and recent authorities place great emphasis on this symptom of the disease. Indeed, the temperature in typhoid is so absolutely essential for the estimation of each individual case that no scientific physician would treat one without regular measurements of the temperature.

It was formerly considered that typhoid fever had to be accompanied by elevation of temperature, and the rule that at some period of the disease the temperature is raised was supposed to be without an exception. That such a thing as afebrile typhoid exists has been called to the attention of the profession by Liebermeister. I shall not enumerate the symptoms of this disease, but I wish to show that we may have absence of rise in temperature and yet the case be one of typhoid fever. Within the last few years I have seen patients with undoubted afebrile typhoid, and this has led me to give the subject consideration. My investigation has convinced me that the disease does occur in an endless number of types, and in this connection I desire to call attention to two cases of the afebrile form which came under my observation during the last sixteen months.

CASE 1.—J. E., a clerk, aged 23, whose previous health had been excellent, came to me Sept. 10, 1899, complaining of lassitude, headache, inaptitude for work, constipation quite pronounced, and loss of appetite. The above symptoms had been present for five days, and there was no temperature, but some splenic tenderness. He was given a cathartic with instructions to call again within forty-eight hours. At the end of this time he complained of having had a severe epistaxis on the morning of the sixth day, no temperature, the tongue dry and coated, and tenderness over the spleen more pronounced. I found both the diazo and Widal reactions positive, and this at once confirmed my suspicion of typhoid fever. On the eighth day there appeared a crop of five distinct rose spots. On the tenth there was quite marked iliac tenderness and meteorism present; the pulse was soft and beating 100 per minute. The patient was put to bed, where he remained for three weeks, and during this time his temperature was taken four times daily and the highest degree recorded was 99. At the end of this time the patient was told that he might go home, but that he was to follow out instructions regarding diet, exercise, etc. On arriving home he disobeyed and partook of a large meal, walked several miles, spent the day and evening in visiting friends, and the following day felt weak and exhausted; on the next day he had headache, no desire for food and felt bad generally. He continued to grow worse, and, five days afterward I found him with mental torpor and dulness, his tongue and lips dry, a new crop of rose spots on the abdomen, and considerable meteorism present, with a large and tender spleen, temperature 102 and pulse 100. This patient, in his relapse, ran a typical course of severe typhoid fever, his temperature pursuing the step-ladder rise and continuing high for four weeks, though he eventually recovered after being in bed two months.

CASE 2.—July 8, 1900, John R., a schoolboy, aged 17, consulted me because of lassitude, intense headache, weakness and gradual loss of appetite, nervousness, inability to sleep and occasional chilliness; he also complained of marked constipation. I found his tongue heavily coated, pulse 106, soft and slightly dicrotic, temperature normal, some iliac tenderness and meteorism present, a crop of rose spots on the abdomen and thorax, Widal and diazo reaction both positive. By July 20 he had improved generally, meteorism had nearly subsided, and he was beginning to crave food, no elevation of temperature had been noted, although it had been taken four times daily after the first visit. From this time on the patient gradually improved, and at the end of three weeks after first consulting me, barring a slight weakness, he was apparently well.

I was taught that typhoid fever had a characteristic course, a step-ladder rise in temperature continuing high for a period ranging from two to four weeks, declining gradually during the third and fourth. I am convinced that we may have genuine typhoid without any rise of temperature. Therefore, the typhoid of to-day is not the typhoid of von Niemeyer, Trousseau, Flint and others, for they portrayed a disease having a fairly constant train of symptoms, a fever with a characteristic course and other equally important conditions varying. Certainly ambulatory and afebrile types of the disease must have been very rare or else were not diagnosed in the practice of the older authors.

34 Washington Street.

A Hospital Steamer for the Philippines.—Major John S. Kulp, surgeon U. S. V., has recently reported the results of a voyage from Manila, on the army transport *Pennsylvania*, to bring sick men from the outlying islands to the general hospitals in that city. The vessel, a Philadelphia built, tripple-expansion, single-screw iron steamer, of 3343 tons capacity, left Manila Oct. 5, 1900, with a small cargo of subsistence and quartermaster's supplies and accommodation for the return of 160 sick soldiers. Everything necessary for the comfort, welfare and convenience of the sick was furnished promptly from the medical supply depot at Manila. The bunks were iron-pipe frames with woven-wire mattresses, all on the main deck, well ventilated and high above the water line. The vessel called at eighteen ports and brought off 155 patients, returning to Manila November 11, after a voyage of 2332 miles. Thirteen of the patients were affected with diarrhea, 46 with dysentery, 19 with malarial fever and 10 were sufferers from gunshot wounds. No death occurred during the trip, although many of the cases when received were of a grave character. In every case there was a marked improvement, and many were practically well by the end of the voyage. The object of the voyage was to determine whether or not it was practical to make use of one of the inter-island transports for the transportation of the sick during her regular trips. The result from an administrative standpoint was unsatisfactory. It proved that a ship devoted solely to the interests of the medical department was a necessity. Although the cargo was insignificant in amount the voyage was prolonged one-third on account of the delays caused by its delivery. Col. Greenleaf, chief surgeon of the Division of the Philippines, states that authority has been received from the U. S. secretary of war to purchase a light-draught ship for use as an inter-island hospital transport, and that measures are now on foot to effect this object, which will solve satisfactorily the question of furnishing the provincial military hospitals with supplies and removing their sick when necessary.

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SATURDAY, FEBRUARY 2, 1901.

THE DIVISION OF FEES.

Commercialism is not a word in good repute in connection with the practice of medicine. Not that it is wrong for a physician to make money if it is done honorably; nor is it beneath the dignity of an ethical member of the medical profession to apply honorable business principles in obtaining just remuneration for services rendered; but it is wrong, and degrading, for him to subordinate all he may do to commercialism. The making of money is the mainspring of commerce, but medicine, in its scientific as well as in its altruistic ideals, has a higher and nobler aim. The laborer is worthy of his hire, but in medicine the latter is only an incidental, not the ideal, end and aim. If it were, our widely-uttered claims of being a liberal profession are false, and a large proportion of what we may call the non-scientific portion of medical literature, including most addresses to graduating classes in medicine, and to societies, is the veriest talking for effect. Sometimes it would seem that there is too much of this kind of literature—that we protest too much in self-praise—but it keeps us committed to our higher ideals and in that way does good.

If, on the other hand, we come out plainly with the admission of purely mercenary motives in the practice of medicine, we misrepresent our profession, for however much we may deny it, should we care to, the practice of medicine is necessarily a self-sacrificing profession, and at best its average rewards are below what equal talent and industry bring in other occupations. It has, moreover, its scientific side which can not be ignored, and a system of ethics published to the world as a rule of conduct which is throughout antagonistic to any purely commercial estimate of the profession of medicine. We can have, therefore, only the alternative of still publicly repudiating commercialism or of giving up our best professional traditions, which is impossible. Even should we profess to do this, we could not do so in practice, and would not if we could. There is, therefore, no choice in the matter as regards the practice of medicine generally; the question only remains as to the course to be followed in special cases, and as to certain practices that tend toward questionable business methods.

One of these is the giving of commissions. It might naturally be supposed that this is not a debatable question, that such a practice is so opposed to the traditions and to the ethics of the medical profession that there could be but one opinion—and that emphatically against it. That this supposition is not a correct one is evidenced by the facts that: 1, a prominent physician not long ago read a paper before a medical society, in which he advocated a division of the fee; 2, a professor in a leading medical college is reported to have said in a medical society last week, when this question was being discussed, that he was in sympathy with the idea; 3, it is openly charged that certain men are to-day giving commissions to physicians sending them cases. It therefore seems necessary to consider the matter and let it be known whether such a practice is recognized as right or whether it shall be condemned. Therefore, if it is to be condemned, let it be done with emphasis, and not with an ambiguity of expression that will leave a doubt as to what is meant. On the other hand, if it is decided that it is right, let it be known so that we may all act accordingly. If it is right for one it is right for all. And let the people know it, for the patient is certainly interested in the matter and ought to have a clear understanding of the arrangement.

Any receiving of commissions from surgeons or consultants for cases referred to them, without the knowledge of the patient, would be bringing into the practice of medicine methods that would be degrading even in commercial life. It is evident, however, that no patient is likely to permit himself to be exploited in this way if he can help it, and an understanding as to sharing the consultant's fee must inevitably be a secret between him and the practitioner. Thus the transaction, reduced to its simplest expression, means the introduction of the lowest and most disreputable of business methods into the practice of an honorable profession. The right of the attending physician to remuneration for his services does not enter into the consideration of the question. Whatever he is entitled to he should demand and collect from the patient.

That a surgeon sometimes gets a fee quite disproportionate to the small remuneration received by the attending physician is no argument for the division of that fee. While it is unethical to the last degree to make extortionate charges, the wrong is not made right by another coming in and taking part of that which has been obtained unrighteously, provided it has been so obtained. But whether it is right or whether it is wrong can be very easily decided, for the question simply resolves itself into this: Does the patient know of the transaction? If so, then it is legitimate and ethical; if not, it is collusion.

This question has been taken up by the newspapers and, as usual, the medical profession has been misrepresented, misquoted, and maligned. To read the lay press opinions one would suppose that this commission business is a common practice, but we protest that it is not. What little has been done has been done secretly and under cover, and by but a very few. That it has been done, and by those who claim respectability, can not

longer be denied, and there is no use in treating the matter ostrich fashion, for shutting our eyes to it does not prove its non-existence. It is hoped, therefore, that those societies which do take it up will meet the question fairly and squarely, so that there may be no misunderstanding in the future. Let it be known whether the medical profession is merely a money-making trade, adopting the methods, good and bad, of those others with whom money-getting is the sole aim, or whether it is an honorable profession with a well-earned reputation for philanthropy and good deeds, which its members do not propose it shall lose.

MEDICINE OF THE NINETEENTH CENTURY.

Notwithstanding the power that the discovery of the uses of steam and electricity has given to the race; notwithstanding the happiness that education and improved ethics have brought to humanity, the greatest gift that the nineteenth century has given to man has been the discovery of scientific laws that lead to health; laws by the knowledge of which the plague and the diseases of other countries have been kept from spreading through the community, and laws which have taught physicians how to speedily ease suffering and to save and lengthen life.

A masterly and comprehensive syndicate article on "Medicine in the Nineteenth Century," from the pen of Dr. Osler, has just appeared. In it he sums up the discoveries and the advances of medical science in the last one hundred years, and to the layman his lucid descriptions of progress can not but be a revelation.

At the beginning of the last century the theory that "aqueous" and "dry humors" were the seat of disease was still taught. In 1801 Bichat, a young French physician, taught that the seat of disease was not in the organs themselves, but in the tissues of the organs, and thus gave an impulse to the study of morbid anatomy. Laennec discovered the art of auscultation, and his contributions to the study of the diseases of the lung and heart really laid the foundation of modern clinical medicine. Bright's researches on the kidneys and the differentiation of the fevers into typhoid, typhus, relapsing and yellow were the beginning of the original work. Once the idea of scientific investigation took the place of the philosophic discussion of theories, the light began to break, and as it lit up first one source of disease after another, we, who look backward in review, can see how dense must have been the darkness of ignorance before the present century.

In the growth of specialism, while there has, perhaps, been a loss in breadth and harmony, there has been the compensation of greater accuracy in the application of special knowledge. This has been particularly valuable in the diseases which are peculiar to women, especially to accidents incident to child-bearing, and in the great improvement in the treatment of insanity.

At the beginning of the century there were but three medical colleges in the United States and only two general hospitals. It was the custom of practitioners to take students as apprentices, and the well-to-do finished their education abroad. After 1830 a remarkable change took place, owing to the leaven of French science brought from Paris by American students. Between 1840 and 1870 there was a great increase in the number of medical schools, but the standard was low and the work poor, from the multiplicity and rivalry of ill-equipped institutions. However, the evolution of the medical school that followed the reformation, begun in 1868, by raising the standard over the whole country, was one of the most remarkable phenomena in the history of medicine in the United States.

Dr. Osler calls attention to the fact that sanitary science, or hygiene, is one of the bright spots of the century. A knowledge of the conditions of disease, and the means of transmission together with the culmination of the art of preventive measures, has made smallpox, as a dangerous disease, a thing of the past. It has effectually kept cholera and the bubonic plague from spreading in the country. It has restricted yellow fever to its original localities, and has reduced the death-rate of typhus from 1228 per million—in England sixty years ago—to 3 per million to-day, while it has so conclusively proved the exact precautions that must be observed to prevent typhoid and tuberculosis, that it is only through gross carelessness and wilful lack of sanitary measures that they can spread.

But as he remarks: "Preventive medicine was a blundering, incomplete science until bacteriology opened unheard of possibilities for the prevention of disease." The brilliant overthrow of the hitherto much-discussed theory of "spontaneous generation," by Pasteur, Tyndall, Koch and Cohn, and the tracing of each disease to its bacteriologic origin has been the bright triumph of the century. It has led to a knowledge of wound infection, which has served as the foundation stone of the science and art of modern surgery. It has been the means of determining definitely the cause of leprosy, so that plague may never again obtain a foothold. It has reduced the aggregate death-rate of diphtheria fully 50 per cent., since the discovery of antitoxin, and concerning that most deadly and insidious of human diseases, which Dr. Oliver Wendell Holmes called the "white plague"—tuberculosis—it has taught the origin and means of prevention, that may, if faithfully followed, lead to the eradication of the disease. In summing up the revelations that have been made concerning contagious disease, through bacteriologic investigation, Dr. Osler outlines the fields of investigation that have not yet been worked with success. The cause of contagion of the exanthemata, measles, scarlet fever, chicken-pox, smallpox, and of whooping-cough, though yet unknown, he thinks may be of bacterial origin, but that the special bacteria may be too minute for any known microscope to reveal.

The last word of the century on these lines is concerning serum-therapy, which experimenters are trying

for every contagious disease, with effects that will probably modify present lines of treatment within the next ten years. While there has been a remarkable diminution in the prevalence of a large number of all the acute infections, "pneumonia," says Dr. Osler, "not only holds its own, but seems to have increased in its virulence," while concerning venereal diseases, which continue to embarrass the social economist and to perplex and distress the profession, he recommends legislation.

The brilliant experiments of the summer of 1900 on the Roman Campagna, proving conclusively that malaria can be communicated by mosquitoes, and solving at once the mystery of marshy lands, the hot season and the night air, is almost a spectacular ending to the century's work and opens an entirely new field for investigation concerning the relations of insects and animals to human diseases.

One of the striking features of modern medicine, as Dr. Osler points out, is the tendency on the part of physicians to give little or no medicine and to substitute attention to diet, exercise, rest and climate for drugs. And yet the century never witnessed a more perfect and all-abiding faith in drugs on the part of the layman than at its close. But as this man of wisdom concludes, faith is as ever a large element in the success of the practitioner, and, as Galen said, "confidence and hope do more than physic."

THE HEREDITY OF DIABETES.

Despite the earnest study that has been devoted to the subject of diabetes in recent years, the most that can be said with regard to the nature of the disease is that it is the expression of some as yet obscure derangement of metabolism, in consequence of which carbohydrates are not properly assimilated and consumed in the body, and appear in the blood and the urine as glucose. While the affection is sometimes observed in association with organic disease, more especially of the brain, and less commonly of the pancreas, no gross lesion is appreciable in the majority of cases. The derangement of function must, therefore, be referred in many instances to structural, textural, cellular or nutritive alterations, and a mutual relation exists between this assumption and the fact that the disease is sometimes transmitted by heredity. It is estimated that the latter takes place in about 25 per cent. of the cases. Thus, Thomas Oliver[1] cites an investigation by Weil of 90 members of a family through four generations, of whom 21 were certainly and 13 doubtfully diabetic. He also relates of an applicant for insurance that the father, three brothers and one sister had died from diabetes. Other instances are on record in which seven and eight children, respectively, in one family have exhibited diabetes. In a family reported by von Noorden, ten members of four generations were diabetic. J. H. Pleasants[2] has recently reported six cases of diabetes in two brothers, two sisters, an uncle and a great-uncle, among 24 descendants of a common progenitor, of whose urine examination was made in all but one case. Investigation, with the object of shedding light on the question of conjugal diabetes, into the condition of those who had married into the family, yielded only negative information.

A study of the reported cases of diabetes in which heredity appears to have been an etiologic factor discloses certain peculiar features of the familial type of the disease. It is often observed that the disease occurs in an uncle, an aunt, or a cousin, while the parents escape. This may be conveniently spoken of as the "collateral inheritance" of diabetes. In the same way, a grandparent may be diabetic, while the parent escapes. When successive generations are affected, there is a tendency for the disease to develop at a progressively earlier age. When more than two members in the same generation are diabetic, there is a tendency for the disease to appear at approximately the same period of life. While hereditary diabetes developing in the first two decades is often of a severe character, the cases developing later in life are generally of a mild type. In a certain number of cases the disease has appeared in the children prior to its occurrence in the parent. There is frequently a neuropathic tendency in diabetic families. Cases are recorded in which several children were diabetic, while the others suffered from various psychoses. Obesity is often a characteristic of families in which diabetes occurs.

1. Lancet, Nov. 10, 1900, p. 1335.
2. Johns Hopkins Hospital Bulletin, Dec., 1900, p. 325.

INTOXICATION WITH CREOSOTE.

Creosote is one of the best of the many medicinal agents recommended for the treatment of pulmonary tuberculosis, and in view of the large scale on which it has been employed and the freedom with which it has been administered, it is indeed fortunate that its toxic effects are not more pronounced than they have proved themselves to be. The substance exhibits certain points of resemblance to carbolic acid, by which it is at times contaminated or wholly replaced, and it is possible that some cases of intoxication attributed to creosote may really be due, in part at least, to carbolic acid. Nevertheless, creosote is capable of toxic effects, and occasionally, as some cases recorded in the literature testify, there may be a marked idiosyncrasy to its action.

Creosote, though very pungent, is less escharotic than carbolic acid, but, taken in excess, it gives rise to nausea, vomiting, colicky pain, and diarrhea, with vertigo, obscurity of vision, depression of the action of the heart, convulsions and coma. The soluble sulphates are recommended as antidotes, and in cases of poisoning the stomach should be evacuated and ammonia and other stimulants administered. An instance in which the ingestion of a large amount of creosote on the part of a child was recovered from on the prompt institution of active treatment is reported by Dr. H. M. Hewlett.[1]

1. Intercolonial Med. Jour. of Australasia, v, No. 10, p. 501.

A girl, 3½ years old, swallowed 2 drams of pure creosote, and immediately complained of abdominal pain. She was at once given a tablespoonful of olive-oil, but soon became unconscious. When seen, twenty minutes later, she was insensible, and the face was pale, the lips cyanosed, the respirations extremely shallow, and the pulse imperceptible. The eyes were fixed, the pupils contracted and immobile, and the extremities cold. The muscles were flaccid, and no difficulty was experienced in introducing a tube into the stomach and practicing lavage, about two quarts of warm water being used. The stomach was then washed out with two pints of strong solution of magnesium sulphate, about six ounces being left in the viscus. Strychnin, 1/25 gr., was injected hypodermically, and the patient was wrapped in blankets and surrounded by hot bottles. A rectal injection of extract of beef and brandy was also given. In about eight minutes after the stomach was emptied the color of the lips improved and the pulse became perceptible. In another ten minutes resistance was offered to the presence of the stomach-tube. The color was now good and the respirations full and regular. The pupils were still contracted, but reacted to light, and the extremities were warm. Improvement continued thereafter without relapse. Pain over the region of the stomach was complained of when a little white of egg and milk was swallowed a couple of hours later, but this was relieved by hot fomentations. Urine was not passed for many hours, and then presented a dark-brownish color. Subsequently the urine exhibited a watery-green and then a pale-yellow appearance. The first bowel movement also was dark in color and smelled strongly of creosote. There were no after-effects, and in the course of a few days the child was running about again and appeared none the worse for her dangerous experience.

MISSOURI'S CHIEF EXECUTIVE.

The *St. Louis Courier of Medicine* devotes a sarcastic editorial to the outgoing governor of Missouri, who appears to have been, from a medical point of view, about all that the chief executive of a state ought not to be. It expresses the opinion that the most sensible thing of which he has been guilty was his congratulations to the citizens, in his last message, that his term had nearly ended. As one of the dispensations of a kind Providence it may be noted that the new Governor of Missouri is a member of our profession, and if he is true to his antecedents the wind will be tempered to the shorn Missouri lamb.

JUDICIAL EUTHANASIA.

While a bill referring to the manner of execution of criminals was recently under consideration by the Indiana legislature, an amendment was offered to inflict the punishment of death by giving 15 grains of morphin in a glass of whisky. This motion failed, though it is reported to have received a full party vote. The Indiana murderers, "like maudlin Clarence in his Malmsey butt," would undoubtedly favor this mode of execution, but why this special zeal for euthanasia for criminals is such a prominent feature in modern legislation is not clear.

WATCH MEDICAL LEGISLATION.

It behooves the members of the medical profession, in the various states in which a legislature is in session, to keep in close touch with what is going on in regard to the regulation of the practice of medicine. In nearly every state more or less vicious medical legislation is being attempted. In Illinois an amendment to the medical practice act is proposed, in which these words occur: "Nothing in this act shall be construed to apply . . . . to any person who ministers to or treats the sick or suffering by *massage*, or by mental or spiritual means, without the use of any drug or material remedy." The object of this amendment can be readily seen. In those states where there is no committee officially appointed to represent the profession, such legislation as the above will be easily managed and the profession wake up, when it is too late, to realize the fact that laws have been passed that are detrimental alike to the people and to the profession. When this occurs, nine times out of ten it is the fault of the profession itself, a result of lack of organization and of apathy.

RELIGIOUS RITES FOR THE DYING.

A Roman Catholic paper calls the attention of physicians to the advisability of informing Catholic patients or their friends of their condition when it becomes critical, and in any event not allowing them to die before the church's last offices for the dying can be performed. It was possibly in view of something of this kind that led a Missouri judge to decide that it was the physician's duty to inform the patient of his hopeless condition. There are objections to the unqualified adoption of this course, as THE JOURNAL has already editorially pointed out, but the Catholic editor's recommendation has a much better medical sanction. As he sensibly remarks, the peace of mind that follows confession often causes a change for the better in Catholic patients, and the other rites, as some of us may have observed, may have the same effect. Whatever one's own religious views may be, there is good medical reason for respecting those of others, especially in such cases as these. It is not necessary to infer that such warnings are a practical death-warrant to the patient; for they may, on the other hand, be the means of introducing the most potent of therapeutic suggestions.

IS EXERCISE UNHEALTHY?

Falstaff's opinion, that it is better to rust than to be scoured to nothing with perpetual motion, is echoed to a certain extent by a physician who holds that exercise is unhealthy for men past 35 years of age. He has received a number of endorsements from individuals who, while not Falstaffian in all respects, endorse that hero's philosophy to this extent. Among them are cited Russell Sage, the financier, William M. Evarts, and others who have never exerted themselves physically when they

could help it and believe themselves the better for this course. The American people, according to these authorities, are ruining their constitutions by too much activity, and we are told that we should adopt a more restful way of living, at least as regards physical exercise. It would be interesting to exercise one's fancy as to a state of society in which physical inactivity was the rule after 35; it would be a queer world, at least in this latitude. The notion is one of those one-sided ideas that sometimes find expression and are taken up and made the most of by the lay press. This one is comparatively harmless, since there are not many who will believe it, and fewer still who will be able to follow the teaching, as man is constituted and in present social conditions.

THE COCAIN HABIT.

The cocain habit in the South, which has been already noticed by THE JOURNAL, seems to be extending. Measures have been taken to stop the indiscriminate sale of the drug in some cities where the evil is most pronounced, and similar ones are advocated in others. The cocain habit is said to have already invaded some northern cities, though in none of them is it as general a vice as among the negroes of the South. In New York some of the physicians interviewed in regard to the habit and its prevalence claimed that medical students were particularly liable to become its victims, others gave quack remedies as the chief cause of its spread, and the mistaken popular notion that it is a cure for drunkenness was also credited as an agency. Men in thus attempting to conquer one tendency become slaves to another, or both, and their last state is worse than their first. It may be that the danger is overestimated, but it is well to be informed as to the possibilities. In any case the sale of cocain should nowhere be unrestricted; this drug as well as morphin should be only obtainable on physicians' prescriptions and careful registry be kept of all sales. Its present freedom of sale in most sections, to any and every one who asks for it, is a special danger that is the more inexcusable as cocain is a comparatively new drug and the vice has not acquired, like that of alcohol, a time-honored common law sanction.

VITAL STATISTICS AND REGISTRATION OF BIRTHS.

In the retiring message of the late Governor of Illinois there were a few recommendations on matters of medical interest. One of these referred to a defect in vital statistics that is perhaps not peculiar to this commonwealth, but is nevertheless one that calls for amendment. This is the more true since the medical profession is in some respects responsible though not altogether without excuse for its neglect. Any one reading the reports of deaths published in the Chicago lay papers would naturally come to the conclusion that the native stock is on the road to extinction, and that obstetrics forms no part of the medical practice of American physicians. Foreign-born midwives seem to be busy delivering mothers with largely foreign-sounding names, and only occasionally, or at least in very inadequate proportion, do medical men appear to have any share in the work. It was said at one time that a prominent and popular suburb, chiefly inhabited by the best American-born citizens, had almost no births reported from its precincts. Nevertheless, the younger generation somehow comes into existence, and in a reasonable quantity. The facts speak for themselves. The vital statistics in most of our states are practically worthless because they are incomplete. It is easier to get reports of deaths, as burial permits require them, but the fully as important event of a birth too often goes unreported simply because it is practically impossible under present conditions to enforce it. Governor Tanner's suggestion is practical in that it considered the need of offering some recompense to the accoucheurs for the trouble of making the report; without that it is likely that statistics will remain imperfect, as only the most rigid police regulation and oversight, such as are hardly compatible with our customs, would enforce the registration.

Medical News.

ARKANSAS.

DR. JAMES L. GOREE, Pine Bluff, for many years president of the local board of health, has resigned.

DR. ARTHUR B. LOVING, Pine Bluff, has been appointed physician of Jefferson County for 1901, in succession to Dr. William A. Noel, term expired.

THE STATE LEGISLATURE passed a law at its last session imposing a fine of $25 to $100 on any dealer found guilty of selling cocain except on the prescription of a physician or to a physician.

CALIFORNIA.

DR. THOMAS B. W. LELAND, San Francisco, was appointed coroner of the city and county of San Francisco, January 16, vice Dr. R. Beverly Cole, deceased.

SIX SURGEONS of the Emergency Hospital, San Francisco, were dismissed January 18, the reason given for the change being that the service and efficiency of the hospital would be benefited by limiting the tenure of office to one year.

DR. KINYOUN'S critics have caused a resolution to be passed by the state senate, by a vote of 26 to 8, requesting his removal by President McKinley on the ground of unauthorized quarantine of the state because of "alleged bubonic plague in San Francisco."

A CONSUMPTIVE IMMIGRANT from British Columbia, who arrived in San Francisco, January 22, was not allowed to land as he was afflicted with a communicable disease, and was indigent. He will be deported. This is the first instance of the kind in the port of San Francisco.

COLORADO.

DR. JOHN G. KEITH, Leadville, has been elected physician of Lake County.

A BRUTAL ASSAULT was made on Dr. Louis Auerbach, of Denver, by highwaymen, recently. His nose was broken and he may lose the sight of one eye.

VACCINATOR-IN-CHIEF is the title of Dr. John A. Henry, who has been appointed to supervise the work and inspect the results of the compulsory vaccination recently ordered in Denver.

DENVER PHYSICIANS, who have had offices in the California Building, are said to be making plans to erect a building exclusively for physicians. The reason for this action is said to be a proposed, unreasonable advance in rent.

GEORGIA.

DR. JOHN C. GOODMAN was elected city physician of Tifton, January 12, vice Dr. Arthur P. Hunter.

THE ATLANTA BOARD OF HEALTH reorganized January 18, re-elected Dr. William C. Jarmagin, chairman, and elected Dr. Everard H. Richardson, secretary.

THE MACON HOSPITAL, in 1900, cared for 232 white and 120 colored patients. The earnings from pay patients amounted to $3712.50, an increase of $1204 over those of the previous year.

THE SAVANNAH HOSPITAL will benefit to the extent of about $40,000 by the will of the late Dr. William Duncan, of Savannah, on the death of the brother of the deceased. A bequest of $1500 is to be paid to the hospital at once.

ILLINOIS.

THE ISOLATION HOSPITAL at Peoria is ready and the three smallpox patients who have been quarantined pending its completion have been transferred to it. No new cases have developed.

DR. FRANK ANTHONY, Sterling, who served with distinction as major and surgeon of the 6th Illinois Infantry, U. S. V., in the war with Spain, has been appointed assistant surgeon-general of the Spanish-American War Veterans in the Department of Illinois, with the rank of colonel.

Chicago.

THE DONATIONS to date toward the hospital for the treatment of consumptives to be erected this year at North Forty-eighth and North Avenues, under the management of the sisters of St. Elizabeth's Hospital, aggregate $20,067.

Norwegian Tabitha Hospital.—At its seventh annual meeting this institution reported assets of $37,640.75 and liabilities of $8037.27. A proposition to put the hospital under the management of one of the Norwegian church societies was rejected and it was decided to continue the management as heretofore, receiving patients irrespective of creed or nationality.

Alumni Organization.—Alumni of Bellevue Hospital Medical College and the medical department of New York University have organized a Western branch of the association, with Dr. James F. Todd, president; Drs. James G. Kiernan and John McKinlock, vice-presidents; Dr. Willis O. Nance, secretary, and Drs. Hugh T. Patrick, J. Sanderson Christison, Julius Grinker and Sanger Brown, executive committee.

The Health of the City.—The report of the Department of Health for the week ended January 26 shows a reduction of about 50 per cent. in the mortality from the acute pulmonary afflictions, as compared with the previous two weeks. The total mortality has also decreased more than 10 per cent. as compared with the previous three weeks. The rate per 1000 per annum was 14.77. The deaths under 1 year were 98, and over 60 years, 102. Consumption caused 53 deaths; pneumonia, 74; bronchitis, 26; influenza, 17, and violence, 30.

Internes in Asylums.—The Chicago Medical Society, Chicago Pathological Society, Chicago Neurological Society and Chicago Society for Internal Medicine have passed resolutions recommending the selection of at least four medical internes for each of the state hospitals for the insane; that such internes shall be selected by competitive examinations from the graduates of the medical colleges in the state, recognized by the State Board of Health, that they shall serve for one year, and receive as compensation lodging, board, washing, and $100 at the expiration of their term of service, and that the professors of nervous and mental diseases of the five medical colleges having the largest number of students in attendance shall be the examiners to select these internes.

Resolutions on Division of Fees.—The committee to whom was referred the resolutions of the Chicago Medical Society, January 23, met and adopted the following resolutions, which were recommended to the Society for adoption: "Resolved, That the offering, or the giving of a commission, or percentage of a fee, by a consulting physician or operating surgeon, or the asking or receiving such a fee or commission in any guise whatsoever, by the physician referring the case, is dishonest, disreputable and unethical, unless such arrangement be made with the full knowledge of the patient; Resolved, That a violation of this resolution shall subject the offender to expulsion from the Society."

The resolutions were adopted unanimously by a rising vote. The Physicians' Club has passed resolutions to the same effect: "Resolved, That the Physicians' Club of Chicago most severely condemns the seeking for or the receiving of a commission or part of a consultation or operation fee, as well as the offering or giving of a commission, or a part of a fee, as practices highly dishonorable and detrimental to the best interests of the medical profession."

Vaccination a Safeguard.—The interest in vaccination justifies belief that the city will be spared any such serious results from the present outbreak of smallpox as have usually followed epidemics, even when contagion was much less widely spread. The bulletin of the Health Department again refers to the object-lesson in vaccination that Germany furnishes the world. As has been truly said, that country stands alone in fulfilling in great measure the demands of hygiene as to smallpox. In consequence of the calamitous epidemic of 1870-71, it enacted the law of 1874, which makes vaccination obligatory in the first year of life and revaccination at the tenth year. In 1871, out of a population of 50,000,000, there were 143,000 deaths from smallpox. By vaccination and revaccination rigorously enforced through the law of 1874, this mortality has been reduced to 116 a year in a much larger population. These cases, moreover, occur almost exclusively in towns on the frontier. In a recent lecture, Dr. Bizzizziro, of Rome, said: "In 1870-71, during the Franco-German War, the two peoples interpenetrated each other, the German having its army completely revaccinated, while the French were vaccinated perfunctorily. Both were attacked by smallpox, but the French army numbered 23,000 deaths by it, while the German army had only 278; and in the same tent, breathing the same air, the French wounded were heavily visited by the disease, while the German wounded, having been revaccinated, had not a single case." No properly vaccinated person in Chicago need fear the present outbreak. Every unvaccinated person is in danger of the disease, besides being a menace to the reputation of the city. The type of the disease continues as mild as during the previous three years of its prevalence in the country, and its mortality-rate is insignificant. Of the two deaths that have occurred at the Isolation Hospital since last June, only one is properly attributable to smallpox. The other was the victim of a chronic incurable disease of the liver, and he was awaiting death at the U. S. Marine-Hospital when attacked by smallpox in a very mild form.

INDIANA.

THE ESTATE of the late Dr. Benjamin F. Swafford, of Terre Haute, is valued at $50,000.

DR. WILLIAM E. STEMEN, who has been serving in the Philippine Islands as an acting assistant surgeon in the army, has returned, requested annulment of his contract, and will locate in Fort Wayne, associated with his father.

THE PRESIDENT of the Indiana State Board of Health strongly favors the bill introduced in the present legislature providing for the establishment of a state laboratory. The last legislature passed a pure food law, but failed to appropriate funds for its enforcement.

A BILL has been introduced in the house of representatives providing for the establishment by the state of a village for epileptics. A tract of not less than 1000 acres of land is to be purchased and $40,000 to be appropriated for this purpose. The bill goes into details, but does not suggest any particular site for the colony.

IOWA.

DR. HARRY M. HOAG sustained a loss of $1000 by the fire at Garner, January 11.

DR. HARVEY L. COKENOWER, Clarinda, has been appointed chief division surgeon for the Keokuk & Western Railroad.

THE FORMAL TRANSFER of the Iowa College of Physicians and Surgeons, Des Moines, to Drake University was made January 19.

APPLICANTS numbering twenty-five assembled at Des Moines January 22 to take the examination of the Iowa State Board of Medical Examiners.

DR. LEVI LOAR, of Selma, who was sentenced to the penitentiary for six months for attempted abortion, has appealed his case to the supreme court. He has also brought suit against an attorney and another person to recover $300, which he alleges he paid them to compromise the matter. He also claims $5000 damages.

District Physicians' Compensation.—In Iowa physicians are not burdened with heavy compensation for their services. The newly-elected physician for Red Oak city and township, including the jail, poor-house and hospital, medicines and services, receives $200 a year. Le Mars district pays its physician $175; Merrill district, $80; Remsen district, $65; Akron district, $100; Kingsley district, $75, and Buckingham and Perry townships, $57 per annum.

MICHIGAN.

CHIPPEWA COUNTY SUPERVISORS have appropriated $600 for the construction of a temporary isolation hospital on the poor-farm site.

DR. W. H. HUTCHINGS has been appointed chief surgeon of the Ann Arbor Railroad and Steamship Lines, with headquarters at Ann Arbor.

BILLS HAVE BEEN introduced in the state senate and house of representatives, providing for the establishment of a hospital for consumptives.

MEDICAL MEN OF THE SOO have decided to form an association for mutual benefit and professional advancement. At the initial meeting held January 16, Dr. H. E. McLennan, Sault Ste. Marie, was elected secretary of the association.

PORT HURON is to have a new hospital to be known as the "Memorial Hospital," to cost $25,000, and to be non-sectarian. Dr. Mortimer Wilson is the secretary of the association, which held its first meeting and adopted resolutions January 21.

MINNESOTA.

THE CORONER of St. Louis County, Dr. Samuel H. Boyer, of Duluth, has announced the appointment of medical deputies as follows: Dr. George N. Buchart, Hibbing, and Dr. George A. Tripp, Tower.

DR. F. A. DUNSMOOR, Minneapolis, medical director of the Asbury Hospital, suggests in his annual report that the old building be utilized as a pathological department, and that eventually it be maintained by the various hospitals of the city as a quarantine hospital, having separate wards for the different communicable diseases.

Smallpox Precautions.—To cope with smallpox in the logging camps of northern Wisconsin and Michigan, it was decided at a conference of health officers and loggers at Duluth, that vaccination should be encouraged, quarantine regulations enforced, and isolation hospitals provided. The loggers agreed to employ only vaccinated men or those immune by having had smallpox.

MISSOURI.

DR. HARRY H. JOHNSON, Neosho, has been appointed local surgeon for the Kansas City Southern Railway.

DR. OSCAR O. BRAECKLEIN, Kansas City, was fined $5 on January 19, for having failed to report a case of smallpox.

DR. BUDFORD M. HENRY, Alba, was seriously injured in a runaway accident, January 12; his upper jaw was broken and his right eye so injured that it was necessary to have it enucleated.

THE SMALLPOX SITUATION in Fayette was taken up at a recent meeting of the Howard County Board of Health, at Fayette, and it was decided to erect an isolation hospital at once, to place guards near homes where the disease is known to exist, and to order compulsory vaccination.

Missouri State Medical Association.—It is announced in the *Medical Herald* that the St. Louis and St. Joseph medical societies have passed resolutions urging the officers of the State Medical Association to change the date of the meeting from May 20-23 to February 26-28, and that immediate and active steps be taken to change the date and to promote the success of the session. The reason for this is that an important bill to regulate the practice of medicine is soon to be brought before the state legislature, and it is desired to give the association the opportunity to act in this matter in the interest of the profession at large.

NEW JERSEY.

DR. LIVINGSTON HINCKLEY, Newark, for sixteen years superintendent of the Essex County Hospital for the Insane, has resigned.

THE ORANGE MEMORIAL HOSPITAL, at the annual meeting of its directors, January 14, appointed Dr. William J. Chandler, South Orange, to fill the vacancy on the staff caused by the death of Dr. William Pierson, and Drs. Mefford Runyon, South Orange, and Harry E. Matthews, Orange, on the general staff.

Hospital for Consumptives.—Senator Hutchinson, of Mercer County, will introduce a bill asking for an appropriation of $50,000 for the establishment and equipment of a hospital for the care and treatment of cases of tuberculosis. The measure is the result of the action taken by the Trenton Board of Health on the protection against the spread of tuberculosis in healthy communities, and the bill was prepared and approved by the Mercer County Medical Society.

The Camden City Dispensary.—The board of managers of the dispensary have elected the following staff: Medical, Drs. John G. Doron, Grant E. Kirk, Levi B. Hirst, Frederick V. Dunn, Joseph H. Willis, William I. Kelchner, and William H. Pratt, Camden, Edgar B. Sharp, Berlin, Vernon E. De Grofft, Bridgeton; diseases of the eye, Dr. Robert Casperson, Camden; diseases of the nose, throat and ear, Drs. Ernest S. Ramsdell, Camden, and Vernon E. De Grofft, Bridgeton; district physicians, Drs. Joseph Willis and William H. Pratt, Camden.

Investigation of Morris Plains Hospital for the Insane.—A resolution has been introduced in the legislature calling for an investigation of this hospital. This action has been hastened on account of a case in which it was charged that the wife of a citizen had been committed to the asylum when her friends believed her to be sane. She has recently been adjudged in possession of her right mind and has been released. It is charged that sane persons have been committed to the hospital several times. A revision of the laws will also be asked for. It is hoped that some provision will be made for epileptics so that they may be kept separate from the chronic insane.

NEW YORK.

DR. D. W. HARRINGTON, Buffalo, has presented an ambulance to the Buffalo General Hospital.

DR. H. MCCLELLAN, Jeffersonville, was arrested January 9, at the instance of the Sullivan County Medical Society, and held in bonds of $500 on the charge of practicing medicine without a state license.

DR. WALTER D. GREENE, assistant health commissioner, of Buffalo, has notified each parochial school that every pupil not vaccinated within the last five years must be vaccinated before February 11.

THE BILL affecting the State Board of Health, which provided for a commissioner at $2500, the appointment of two state officers to serve without pay, and for a secretary at a salary of $3500, has been drawn up and will be presented to the legislature at the present session.

THE STATE BOARD OF HEALTH reports that with 150 cases of consumption and more than 40 of typhoid fever in Sing Sing prison, and with such defective plumbing arrangements that gases back up into the buildings with the rise of the tide, it does not appear that this prison is a fit abode for human beings other than those who have been sentenced to death.

Proposed Medical Law.—A bill has been introduced in the legislature having for its special object the suppression of quackery, and more particularly faith-curing and like humbugs. Opposition to this very proper measure has arisen from the proprietary medicine men, who fear that bringing into the category of those engaged in the practice of medicine, all persons who shall "prescribe, direct, recommend or advise for the use of any other person any remedy or agent whatsoever" will prevent them from advertising as hitherto, and this would end their business. Assemblyman Bell, who introduced the bill, declares, however, that it is not aimed at any class, trade or organized sect, and that it does not include patent medicines that are the recipes of registered physicians. He adds, as his opinion, that any one who practices medicine, be he a faith healer, or what not, should first be educated as a physician.

NORTH DAKOTA.

DR. AUGUST S. EGGERS, Grand Forks, has returned from his European trip.

DR. E. C. BRANCH has been appointed assistant physician of Cass county, succeeding Dr. Henry G. Fish, Wheatland.

THE STATE BOARD OF MEDICAL EXAMINERS met at Fargo, January 10, examined applicants and issued licenses to practice medicine to five physicians.

DR. HENRY A. BEAUDOUX, Fargo, has been appointed oculist and aurist of the divisions of the Northern Pacific Railway which end in Fargo. His territory extends from Mandan to St. Paul.

OHIO.

DR. ALEXANDER M. STEINFELD, house physician of the Children's Hospital, Columbus, has resigned.

TWO CINCINNATI IRREGULARS were arrested at the instance of the State Board of Medical Examiners on the charge of practicing medicine without first having complied with the law requiring registration.

DR. BENSON E. SAGER, Cleveland, has been arrested on the charge of failing to report a case of diphtheria within the legal limit. He claims that he took every precaution and his friends acknowledge his technical guilt.

Concentration of Medical Libraries.—A resolution has been introduced before the Cincinnati Library Board, looking toward the concentration of all the medical libraries in the city, namely, those medical works in the Public Library, the library of the City Hospital, and the books in the possession of the Academy of Medicine—a reading room at the Public Library, where they can be properly arranged and catalogued, and placed in charge of a competent attendant.

Board of Medical Registration and Examination.—The annual report of the Board, filed at Columbus, January 19, shows that, in 1900, 679 certificates were issued to graduates; 10 to practitioners of ten years' experience, and 6 on examination, while 30 applicants were rejected and two certificates revoked. Since the establishment of the Board, 9373 certificates have beeen issued to graduates, 725 to legal practitioners, 15 one-year certificates on examination, and 6 to graduates on examination. The rejections number 464, of which 215 were graduates, 227 legal practitioners and 22 as a result of examination.

Examination of Prostitutes.—During the past two months the health department of Cincinnati has been endeavoring to limit the spread of venereal diseases by forcing prostitutes to submit to rigid examination by some appointee of the Department. It had been learned that many of the physicians who had previously been engaged in this work were in the habit of issuing certificates without making any examination whatever. Suit was brought against the department in the person of the health officer, Dr. Clark W. Davis, by several physicians engaged in this business, for $10,000, under the plea that their work was unlawfully interfered with by the health department. At the regular meeting of the Cincinnati Academy of Medicine, January 21, a resolution was offered by Dr. Charles A. L. Reed, president of THE AMERICAN MEDICAL ASSOCIATION, seconded by Dr. Thadeus A. Reamy, and adopted, that the Academy approve and sanction the action of the Department and of Dr. Davis.

PENNSYLVANIA.

INFLUENZA PREVAILS to such an extent in Allentown that four schools have been closed. Many employees of the business houses are also ill with the disease.

DIPHTHERIA has recently increased in Mount Joy at an alarming rate. During the week ended January 21, seventeen new cases developed. Several deaths have occurred.

THE CONTRACT for the construction of a barracks, hospital and crematory at Marcus Hook has been awarded by the State Quarantine Board at a figure less than the amount available, $3500.

DISINFECTION AND FUMIGATION at Pittsburg have been discontinued because the sum appropriated for the purpose has been exhausted. Hereafter, unless further provision is made, disinfection must be made at the expense of the owners or occupants of buildings.

Philadelphia.

SNEAK THIEVES raided the offices of Drs. Otho D. Schaul and B. Frank Wentz, January 19.

A LAY BOARD OF TRUSTEES of the Medico-Chirurgical College and Hospital was elected January 15. Heretofore the trustees have been medical men.

THE BOARD OF CHARITIES AND CORRECTION at a recent meeting added thirteen members to the staff of the Philadelphia Hospital, making the total number 66.

DR. WILLIAM G. SPILLER has been appointed demonstrator in neuropathology at the University of Pennsylvania. He will conduct a two-months' elective course in this branch.

WILLIAM G. TOPLIS, chief of the bacteriological laboratory at the test filtration plant of the city's water-supply, has resigned, and William R. Copeland, of Pittsburg, has been appointed his successor at a salary of $200 a month.

DR. ANNA SHARPLESS has been re-elected president of the corporation of the West Philadelphia Hospital for Women. This institution has recently received $5000 for the endowment of a free bed, through the bequest of Mary Baker, deceased.

TENNESSEE.

DR. PIERRE WILSON, Denison, has gone to Baltimore, on his way to Germany, where he expects to study for nine months.

DR. JEFFERSON M. HARBISON, one of the oldest physicians in Knoxville, is very ill, and his recovery is considered doubtful.

DR. ANDREW P. NELSON, Winchester, has been elected physician, and Dr. Thomas B. Anderton, health officer, of Franklin County.

DR. JAMES M. INGE, Denton, has been appointed to the chair of anatomy and clinical surgery in the medical department of the University of Texas.

THE NEW CITY HOSPITAL at Knoxville was formally accepted by the city council, January 18. The cost of the building to date has been $32,243.36, and $15,000 additional is asked for to complete the buildings and grounds.

DR. J. B. ADAMS, San Antonio, who recently came to that city from Alabama, on account of his health, was seriously injured by a street-car, Jan. 14, sustaining crushing wounds of both legs, necessitating their amputation.

A CHARTER was granted January 12 to the Memphis Hospital Medical College Building Company, incorporated by Drs. William B. Rogers, Elmer E. Francis, James L. Minor, Bennett E. Henning, Alexander Erskine, Dudley D. Saunders, E. Paul Sale, B. Frank Turner and Thomas J. Crofford, with a capital stock of $40,000.

VIRGINIA.

DR. WILLIAM P. MATTHEWS has been chosen to succeed Dr. Lawrence Ingram as president of the Manchester Board of Health.

THE EXAMINATION held by the State Board of Medical Examiners, Dec. 17-20, resulted in the passing of 42 out of 53 applicants.

DR. HENRY T. BATTE, Norfolk, has been appointed city coroner of Norfolk, to succeed Dr. Robert S. Spillman, who has accepted a contract as acting assistant-surgeon in the army.

Faculty Changes.—The Medical College of Virginia has appointed Dr. Ennion G. Williams professor of pathology and bacteriology, vice Dr. Ernest C. Levy, resigned; and Dr. B. Lawrence Taliaferro, assistant to the chair; Dr. Greer Baughman, who has just returned after three years' study in Vienna, demonstrator of physiology, and Mr. E. D. Starke, prosector in anatomy. In the University College of Medicine, Dr. J. Allison Hodges has been chosen president to succeed the late Dr. Hunter McGuire and Dr. E. G. Hill, adjunct professor of chemistry.

GENERAL.

PASSED ASSISTANT SURGEON M. J. ROSENAU has returned to Washington, D. C., and resumed his duties as director of the hygienic laboratory of the U. S. Marine-Hospital Service. Dr. Rosenau has been doing special work in bacteriology at the Pasteur Institute, Paris, and the Pathological Institute, Vienna.

THE HOSPITAL-SHIP *Maine*, after thirteen months active service in South Africa, is to become a permanent addition to the British fleet. The vessel's complement of American surgeons, physicians and nurses, thirty-one in all, took formal leave of their ship at a reception tendered them at Portsmouth, England, January 16.

Journals Wanted.—Two copies of THE JOURNAL, vol. iii, No. ii, are wanted to complete sets for libraries, and we will pay 25 cents each for the return of issues of the above date to THE JOURNAL OF THE A. M. A., 61 Market Street, Chicago.

Cats and Plague Infection.—A representative of the U. S. Marine-Hospital Service at Constantinople, under date of Dec. 29, 1900, citing a case of bubonic plague which occurred in the person of the captain of the steamship *Dundee*, which plies between Egypt and Syria, states that the captain had six cats aboard, of which he was very fond. Several dead rats were found on the vessel, and shortly after this three of the cats died. The captain was then taken ill with bubonic plague and died.

Smallpox Data.—In view of the fact of the extraordinary prevalence of smallpox throughout the United States, it now being epidemic in greater or less severity in nearly every state and territory of the Union, the Surgeon-General of the U. S. Marine-Hospital Service is sending out the publications of the Service on the diagnosis, prevention, and management of this disease, to the health authorities of every town in which he learns there has been a case of smallpox.

San Francisco Plague Reports.—*Case 23:* Chun Way Lung, a male Mongolian, aged 60, a merchant, born in China, but residing at 720 Jackson St., San Francisco, died January 6. Dr. Kellogg, the city bacteriologist, saw the case on the afternoon of the 7th, with Dr. Wilson. He was a large, well built and rather fat man, showing no signs of continued illness. His associate gave a history of illness from gonorrhea for twenty days, a swelling appearing about a week before death. They also said he had been very feverish and thirsty, drinking water all the time, and that he had vomited several times during the last two or three days.

Examination showed a large flat swelling in the left groin, over Poupart's ligament, and extending internally to the middle line over the symphysis. Incision of this swelling did not disclose any lymph nodes, but there was much edema, and the tissues were dark, hemorrhagic and necrotic. A piece of the tissue removed showed the presence of the bacillus pestis in large numbers.

An autopsy was held the next morning by Dr. Kellogg, those present being Dr. White, of the U. S. Marine-Hospital Service, and Drs. Kinyoun, Morton, Ryfkogel and Wilson. The lungs were found to be normal, the heart very flabby and containing dark fluid blood, and about one ounce of dark bloody serum in the pericardium. The peritoneum was dry. The spleen was somewhat enlarged, its substance very dark, soft and pultaceous. Smears from the spleen showed many typical plague bacilli.

Two guinea-pigs inoculated with spleen from the case both died in five days of typical plague infection, and the organism has been recovered in pure culture from their organs and blood.

Case 24.—Leam Wing Low, aged 59, a male Mongolian, a laborer, was born in China and has been thirteen years in California, his residence 833 Clay St. He died January 15, at

6 a.m. Dr. Kellogg saw the case on the same day, with Dr. Wilson, and removed a portion of gland from a bubo in the right groin, just below Poupart's ligament. Microscopically the specimen showed the presence of the plague bacillus. He removed the spleen the next morning and found it to be much enlarged, the capsule tense, the substance soft, very dark, and the trabeculæ obliterated. The blood-vessels of the peritoneum covering the intestines were injected. No other glands were enlarged. Smears from the spleen showed the plague bacillus in small numbers. Inoculation experiments have been commenced.

Case 25.—Angelo Colombo, a native of Switzerland, residing at 5 Lafayette Place, was brought into the City and County Hospital by the police patrol on January 14 in an unconscious condition. The following is from the hospital record: "January 15. Patient well developed, well nourished, face flushed and cyanotic. Lies apathetic, pupils moderate in size, equal, and react to the light. Patient lies with mouth open. Tongue and lips dry. Vessels of neck pulsate. No dulness over lungs. Thorax well formed. Heart sounds clear. Abdomen not distended or sensitive. Liver extends 15 cm. below the margin of the ribs. Spleen reaches posterior axillary line. Patient is able to move both upper and lower extremities. Is continually restless and picking at the bed clothes. Temperature when admitted was 97.4. Bladder distended, passed per catheter 760 c.c. urine, acid, sp. gr. 1019, no sugar, a trace of albumin. Was given 1 m. ol. tiglii. Died Jan. 15th, 11 p.m." Dr. Kellogg saw the patient at the city morgue. He found the spleen much enlarged, rather soft, the capsule wrinkled, and having several spots of opaque white thickenings of the latter. The cut surface was dark purple, the trabeculæ partially obliterated. The entire extent of the peritoneum was covered with a hemorrhagic sticky fibrinous exudate, matting together the omentum, intestines and parietal layer of peritoneum. There was no fluid in the peritoneum, and no enlargement of the lymph glands. Smears from the spleen showed the presence of a bipolar staining bacillus which was morphologically the bacillus of plague. Inoculation experiments have been commenced.

CANADA.

A BANQUET was tendered the staff of the *Canadian Journal of Medicine and Surgery*, Toronto, recently.

IN WINNIPEG, a man was recently found guilty of practicing medicine without being duly qualified by the medical act of Manitoba, under two different charges, and fined $25 and costs on each charge.

Scarlet Fever Epidemic.—From a table compiled by the Montreal Health Department, it is evident that that city has passed through a serious epidemic of scarlet fever. The cases in the Civic Hospital, from Sept. 29, 1900, to Jan. 19, 1901, numbered 681. The deaths for the same period were 139, the death-rate being 20.23 per cent.

Druggists and Medical Practice.—The medical detective of the Ontario Medical Council has filed information against eight Toronto druggists for practicing medicine without a license. The cases will be up in the police court next week, and will be watched with interest. It is stated that there is considerable of this sort of work done in Toronto.

La Grippe Mortality.—In Toronto, sixty deaths occurred from acute pulmonary diseases alone between Jan. 1 and 25. The total number of deaths there, to the 25th, was 278, and during the whole of January, 1900, the number was 265. In 1900 the deaths from pulmonary causes numbered 23 for the month, those from diphtheria 10, while this year the latter reached 16 to January 25.

Changes in Ontario Asylums.—Dr. Wilson, assistant at the Brockville Asylum, has been transferred to London, to take the place of Dr. A. T. Hobbs, who has resigned to enter on private practice. Dr. Laidlaw, assistant at the Orillia Asylum, who has just returned from South Africa, has been promoted to the vacancy at Brockville; while Dr. St. Charles, also of Orillia, has been transferred to Hamilton, to succeed Dr. Herriman, who has been transferred to the Kingston institution. The changes took effect Feb. 1.

Scholarship in Medicine.—Queen's Medical Faculty has decided to found a scholarship in medicine in commemoration of Dr. Fife Fowler, dean of the faculty, who has given forty-six years of active service to the college. The scholarship will be known as the Dean Fowler scholarship; $10,000 is required, and the graduates of Queen's throughout Canada and the United States will be asked to contribute. The faculty has already subscribed a goodly portion of this amount. In addition, $10,000 is to be expended on improving and enlarging the medical building. This amount will be raised from members of the faculty.

Deaf, Dumb and Blind.—The annual reports on the Ontario institutions for the education of deaf and dumb at Belleville, and of the blind at Brantford, have just been published. At the Belleville institution, 152 males and 130 females have been in attendance through the year which ended Sept. 30, 1900. Since its establishment, thirty years ago, 1187 children have been treated there. At the institute for the blind, at Brantford, 61 males and 52 females were in attendance last year, this being slightly less than the previous year. It is considered that the blind are decreasing in this province.

Consumptives and Tent Life.—During the recent cold snap, when the thermometer must have registered somewhere in the neighborhood of 20 degrees below zero, many of the consumptives at the sanatorium at Gravenhurst lived and slept in tents, without inconvenience, and, it is stated, with positive enjoyment and advantage to their physical well-being. Dr. J. H. Elliott, formerly superintendent, has returned to the institution after an absence of two years in foreign lands. Most of his time abroad has been devoted to the study of laboratory methods in connection with the bacteriology of tuberculosis, as well as visiting establishments for the treatment of this disease. He was one of the expedition from the Tropical School of Medicine at Liverpool, organized for investigating the phenomena of malaria on the west coast of Africa.

FOREIGN.

THE BUST of the Brussels otologist, C. Delstanche, was unveiled Sunday, January 20, in the otologic clinic of which he was the founder.

THE KATHARINE HOSPITAL at Moscow, the one connected with the clinics of the university, recently celebrated the 125th anniversary of its foundation.

LISBON, PORTUGAL, in addition to more than 20 practicing physicians is said to boast of 150 medical practitioners without legal qualifications—quacks.

DR. JAMES GRAHAM, Sidney, N. S. W., has been elected mayor, and it is expected that the civic hygiene will now be of the best, decreasing the probability of any further plague outbreaks.

ACCORDING TO the *Presse Médicale* of Paris, the budget for the hospitals in 1901 includes an appropriation of 718,000 francs or about $143,000 for gauze alone. This corresponds to 6,300,000 meters.

THE RUSSIAN government has authorized the foundation of a university for women, to have only faculties of medicine, pure science and natural science. A merchant of Moscow has given 3,000,000 roubles for its establishment.

THE MEDICAL SOCIETY OF ATHENS is organizing a "Pan-Hellenic Congress of Medicine" to take place in Athens next May. Foreigners will be welcomed as members of the Congress. The address of the secretary is M. Mangakis, 85, rue de l'Université, Athens.

PLAGUE REPORTS from Sidney, N. S. W., dated December 29, state that there are no further cases in the colony and that on December 3 there were but two under treatment at Brisbane. During the week ending December 3, three cases were reported at Thursday Island.

IN THE GERMAN town of Biebrich, a charlatan treated a pregnant girl for ascites, and, when she was delivered, allowed the child to die, from ignorance of the proper procedures. Criminal proceedings were instituted against him and he was condemned to two months in prison.

HUCHARD'S CLINICAL amphitheater at the Necker Hospital in Paris has been remodelled at his expense, and he has inaugurated a series of bedside talks on therapeutics. If a listener fails to understand anything that has been said, he is to ask for further explanations, placing his request in a box provided therefor, and the next day Huchard again refers to the matter.

Seats for Employes.—The *Sem. Med.* says that the French law, which went into operation with the new year, decrees that seats corresponding to the number of female employes must be provided in stores. The German law requires "a sufficient number of seats" and the English law of 1899 one seat for each three female employes.

Mecca Pilgrimages Regulated.—The pilgrimages to Mecca are to be strictly supervised this year by the sanitary authorities, and they are to be restricted as much as possible. Several districts of India, including the Bombay Presidency, have forbidden residents from taking part in the pilgrimage. All pilgrims leaving India must sail from two appointed ports and submit to rigid disinfection.

G. A. Chatin, M.D.—The death of G. A. Chatin, M.D., of Paris, is announced. He was born in 1813, a member of the Académie de Médecine for forty-eight years, and at one time its president. He was director of the Ecole de Pharmacie and author of the "Comparative Anatomy of Vegetables," among other works. . . . Professor Dubreuil, of Montpellier, France, after twenty years of gratuitous labors in the hospitals, has left to them his property of $140,000. He was 66 years of age at the time of his death.

Inoculations with Syphilis.—Neisser's inoculation of three prostitutes with syphilitic serum some years ago has been frequently mentioned in these columns. He has finally been officially condemned by the German disciplinary court, which has been investigating the matter, and besides a reprimand, a fine of about $75 has been imposed. The minister of public instruction at once issued a proclamation forbidding, in all clinics and other institutions for the care of the sick, all medical intervention other than for diagnostic, curative or preventive purposes.

German Medical Courses.—It is now a definitely established fact that graduates of the technical high schools in Germany are eligible to admission to the medical course in the universities, the same as those who have taken the classical course. An editorial in the *Allg. Med. C. Ztg.* observes that some persons attribute to the unpractical, classical training of physicians in the past the apparent contempt for worldly goods which induces certain members of the profession to serve the sickness-insurance societies at terms lower than the cheapest day laborer's hire. If it is the classical training which is responsible for this ultra-magnanimous conduct, then the acquisition of technically trained members will prove a boon to the profession. But there is little chance that the coolly practical, technical graduates will turn their attention to the arduous career of medicine.

Medical Practice in New South Wales.—The new medical practice act for New South Wales calls for a term of five years' study of medicine. This would, therefore, exclude an American from practice because he is supposed to have graduated from a school of but four years. However, it seems that the first of the five years is similar to the last year usually spent in an American preparatory school before entering an American medical college, and the regulations of the British Medical Council says: "Graduates in the arts and sciences of any university recognized by the medical council, who shall have spent a year in the study of physics, chemistry and biology, and have passed an examination in these studies for the degrees in question, shall be held to have completed the first of the five years of medical study."

Red Cross Society of Japan.—From the *Times* (London) of January 7, we learn that the Red Cross Society of Japan is a very flourishing institution. Its list of subscribers contains nearly 700,000 names, and its annual income is 2,000,000 yen. It has hospitals in the chief cities, that in Tokio being especially fine, and it possesses a large staff of trained nurses, male and female, who in times of peace are at the service of the general public. The Japanese woman makes an admirable nurse. She has been criticised by some foreigners for lack of resolute initiative, and the criticism is probably just where there is a question of dealing with the "masterful Occidental." But she shows no want of resolution in the presence of patients of her own nationality, and her gentleness, sympathy, unremitting attention and complete self-effacement are beautiful qualities. One of the interesting and novel features of the society's organization is that it has two large steamers—the *Mercy* (Hakuai) and the *Saviour* (Kosai)—which are specially constructed and equipped as floating hospitals. In these ships the wounded and the sick find all the comforts furnished by a first-class hospital on shore, and are under the care of a large staff of highly-trained surgeons and nurses. The arrangement made at Tien-tsin was that all the light cases should be conveyed by the most suitable vessels in the transport fleet, and that the graver should be carried by the Red Cross ships. The *Mercy* and the *Saviour* each made five voyages from Ta-ku to Hiroshima between July 18 and October 11, and carried altogether 1678 patients, wounded and sick. Eleven ordinary steamers were similarly employed, and, according to returns just published, the total number of wounded officers and men carried to Hiroshima from the beginning of the complication until October 31 was 776, and the number of sick 2643, making an aggregate of 3419. Out of these the recoveries thus far have been 1717, and the deaths 110. The Red Cross Society has disbursed a sum of 600,000 yen, but the government's outlays are not yet publicly known.

Correspondence.

Dividing the Fee.

MONTPELIER, IND., Jan. 25, 1901.

To the Editor:—The *Chicago Times-Herald*, in its issue of yesterday, contained an article on "The Doctors at Odds on Divided Fees." This appeals so strongly to a common sense of justice that I wish to take sides with those physicians who are opposed to the fee dividing scheme, and endorse as emphatically as I can their reasons for not wanting to reduce the profession to a commercial basis.

Some time ago I received a circular letter, and you may well imagine my disgust and chagrin when I read it. It evidently had emanated from one who fully understood the financial side of the "fee dividing" problem. This would-be surgeon—I say would-be, as no reputable one would send out such a communication—with a great wealth of rhetorical diction, intimated the injustice of not dividing the fee with the man who had brains enough to diagnose the case, and intimated his intention of doing so with all who would send their cases to him for surgical aid. This, to me, had an unmistakable flavor of "fee faw fum."

It has been, during my short career as a general practitioner, my pleasure to consult surgeons, and retain them to operate. I have stood by and eagerly watched each step, while the benefit I derived from this privilege was compensation far in excess of the division of any fee.

Is it possible to conceive of a future time when general practitioners will turn their patients for operation to the highest surgical bidder? I hope not. May a time come when surgeons will clamor with their bidding for an operation, like a pack of wolves howling and snarling over a corpse? I am sure not. Will a time come when the wheels of professional ambition will be retarded or clogged by the having to "divide the fee" proposition staring one in the face who is trudging up the rugged steep, bearing that inevitable banner of excelsior? I pray not. Yet I feel that such a move as dividing fees would be the nucleus from which would grow professional disgrace and ruin.

On the evening of November 3, 1900, the profession of the country set the seal of its approval on hard work and earnest study by tendering to Dr. Christian Fenger a testimonial banquet (see THE JOURNAL, vol. xxxv, p. 1214). This great surgeon, by incessant toil, has won the everlasting praise of his fellows and set an example we may do well to follow, but do not say to him, You may operate on my case if you "divide the fee."

J. C. O'DAY, M.D.

Intravenous Transfusion of Formaldehyde Solutions.

PARK CITY, UTAH, Jan. 26, 1901.

To the Editor:—In your editorial, Dec. 29, 1900, on "Treatment of Tuberculosis," you remark that Dr. R. McGuire has lately treated tuberculosis by intravascular injections of formaldehyde solutions.

Permit me to report some experiments I made three years ago on dogs with intravenous injections of solutions of formaldehyde. Lack of time and a laboratory forced me to give up my studies in this line. I tried to solve the two following propositions: 1. Would it be possible, without injuring the animal, to introduce into the circulation formaldehyde in sufficient amount to disinfect tuberculous lungs? 2. By introducing formaldehyde into a vein of the foreleg—forearm—would the gas, after permeating the lungs, escape by the mouth, or would it go to the left side of the heart and into the general circulation?

It has been proved that plain, sterile water, transfused into the blood-vessels, will injure the blood-corpuscles; therefore, normal salt solution, which is compatible with formaldehyde, was chosen as the menstruum for the formaldehyde. It has, also, been proven that gases can be introduced into the blood without stopping the action of the heart. A piece of white blotting paper was saturated with a solution of fuchsin, then discolorized with dilute hydrochloric acid, which turns it

yellow; when formaldehyde gas strikes this paper, the yellow color turns violet. I mixed 112 minims of formalin—45 minims of pure formaldehyde—with 2 ounces of warm normal salt solution; a vein was picked up in a dog's foreleg and the solution was slowly transfused; the yellow-colored blotting paper was immediately held near the dog's mouth; the violet color appeared in a few seconds. Of course, the dog died in two or three minutes, but the second proposition was solved—the gas escaped by the mouth. On the second dog, I used 25 minims formalin—10 minims pure formaldehyde. On a third dog, I used 37 minims formalin—15 minims pure formaldehyde. These two dogs lived and seemed as well after the experiments as before. In these, also, the formaldehyde escaped by the mouth. The yellow colored blotting paper gave no reaction of the formaldehyde test when arterial blood from the dead dog was heated.

E. VIKO, M.D.

The Philadelphia Medical Journal.

PHILADELPHIA, Jan. 22, 1901.

To the Editor:—The issue of THE JOURNAL for January 5 contained statements which might convey a wrong impression concerning the changes recently made in the *Philadelphia Medical Journal*, its financial strength, the chances of its continued success and the nature of its aims as an exponent of high professional ethics. The insertion of this letter in your columns would therefore be greatly appreciated.

The changes recently made in the editorial department were based upon the action of a board of trustees, which contained at the time, as it does now, a proportion of five physicians to every lay member. That the *Journal* has, and will continue to be inspired by men who are familiar with "high ideals in medicine" and the needs of the general profession is therefore evident. True, the shareholders have not as yet received dividends. This is due to the fact that they have "sunk a large amount of money" in the elaboration of a foundation as enduring as the original plan of the *Philadelphia Medical Journal* was comprehensive. This was not done through the "lack of sagacity of those who put their money into it," but in order to better serve its subscribers and merit their continued patronage—the secret of success. Indeed, never has the ethical, scientific and financial position of the *Philadelphia Medical Journal* been more secure than at the present time; and, far from having "a demoralizing effect on legitimate medical journalism," it will continue, with its old contemporaries, especially THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION, in its efforts to maintain the dignity, honor and scientific standard of American medicine. Your truly,

JOHN B. ROBERTS, M.D., Secretary.

By Order of the Board of Trustees.

The Association's 1902 Meeting.

MEMPHIS, TENN., Jan. 22, 1901.

To the Editor:—The 1902 meeting of the AMERICAN MEDICAL ASSOCIATION should logically come south. Other southern cities, Atlanta, New Orleans, Louisville and Nashville have been honored, and Memphis is now the third largest city south of the Ohio River, with a population, by the U. S. census of 1900, of 102,320. It is well and centrally located, being in the very heart of the great Mississippi Valley. We have also eleven trunk lines, making Memphis accessible from all points. Besides, the adjacent territory, Mississippi, Alabama, Arkansas, Tennessee, Louisiana, Texas and southeast Missouri has many good physicians who have never joined the AMERICAN MEDICAL ASSOCIATION. I believe that if Memphis could secure the meeting next year our membership would be materially increased. Some few have doubted our ability to entertain the ASSOCIATION, but we now have in course of construction one of the finest hotels in the South, and our hotel facilities in general will be ample to accommodate all who may be present. With reference to suitable halls for the various sections, I can safely say there will be no trouble in securing all we need. We have a large auditorium, with a seating capacity of 4500, which would serve well for the general sessions, also for exhibits, and May would be the ideal month for the meeting should it come south. Our business men are liberal and progressive and it is safe to say that the Merchants' Exchange will do its part. Let the AMERICAN MEDICAL ASSOCIATION come south in 1902, to Memphis, the Queen City of the Mississippi Valley. Respectfully,

FRANK A. JONES, M.D.

Incised Wounds.

CHICAGO, Jan. 28, 1901.

To the Editor:—In regard to abstract No. 121, in the January 19 issue of THE JOURNAL (p. 216) I wish to say, without criticizing the author, that I have been using that method ever since it was shown me by Dr. J. A. McDonell, of this city, and it was not original with him. As early as July, 1872, while Dr. McDonell was practicing in Boston, N. Y., an old shoemaker, named Silas Root, witnessed the Doctor trying to sew up an incised wound in a child, and as the child cried from pain this old shoemaker said: "Let me show how to coapt those edges without causing the child any pain." He thereupon took two pieces of shoeleather, shaved the rough parts off, punched holes in the approximating edges and then, by means of shoemaker's wax, attached these two pieces of leather to the skin on each side of the wound, and then laced them together with ordinary fine twine. Union was complete, and Dr. McDonell was so pleased with the result that this method became routine with him in all incised wounds. Later when adhesive plaster was put on the market, Dr. McDonell began to use that, approximating the free edges with a sterilized needle and linen thread, and this is now his routine and has been since the introduction of adhesive plaster.

331 Loomis Street. BENJ. H. BREAKSTONE, M.D.

The British Pharmacopeia.

ASHTON, R. I., Jan. 21, 1901.

To the Editor:—In THE JOURNAL of January 19, your London correspondent speaking of the British Pharmacopeia states that there were converted into this three pharmacopeias in the United Kingdom, issued by the Colleges of Physicians of London, Edinburgh and Glasgow respectively.

Now, in a great organ of professional thought and action like THE JOURNAL its readers expect above all things accuracy. There are, undoubtedly, in the United Kingdom three colleges of physicians, one for each kingdom, in London, Edinburgh and Dublin.

Your correspondent robs Ireland, giving Scotland double her due.

N. O'D. PARKS, L. C. P. I.

Marriages.

W. H. RAMSEY, M.D., Omaha, Neb., to Miss Edna Ball, Waco, Texas, January 16.

EDWARD B. EVANS, M.D., Fargo, N. Dak., to Miss Jennie Lind Lewis, January 13.

NELSON M. BLACK, M.D., to Miss Erna Leidersdorf, both of Milwaukee, Wis., January 22.

FRANK E. DONELAN, M.D., Glenwood, Iowa, to Miss Winifred Wells, Tabor, Iowa, January 13.

CHARLES R. GRANDY, M.D., Norfolk, Va., to Miss Mabel Dickman, Richmond, Va., January 17.

JEDIAH H. CLARK, M.D., Richmond, Ind., to Miss Anna Hessler, Connersville, Ind., January 1.

ANDREW EKERN, M.D., Grand Forks, N. Dak., to Miss Signa Hustmark, Seattle, Wash., January 16.

FRANK MILLARD SEVERSON, M.D., Seneca Falls, N. Y., to Miss Anna Evelyn Mead, Chicago, January 16.

Deaths and Obituaries.

William D. Haggard, Sr., died at Columbia, Tenn., January 25, from the effects of a stroke of paralysis which occurred the previous day. He was born in Kentucky, 74 years ago, and his ambition from boyhood was to be a physician.

When he was 11 years old, his father died, and, as the oldest child, he assisted his mother in the management of the plantation. Later he was a clerk in a store, a school teacher, and at the age of 19 became tax assessor of Marion County. He saved enough to begin his medical studies at the University of Louisville in 1847, but completed his medical course at Jefferson Medical College, Philadelphia, and was graduated there in 1851. He practiced in Gallatin, Tenn., until 1864, and then moved to his farm near Sharon Hill. In 1874 he moved to Nashville, and was connected, as an instructor, with the medical department of the University of Nashville and Vanderbilt University. In 1884, he was elected to the chair of diseases of women and children in the medical department of the University of Tennessee, which chair he had occupied until recently, when he resigned in favor of his son. He has been a continuous member of the Tennessee Medical Society for a half century, and of THE AMERICAN MEDICAL ASSOCIATION for many years. In 1887 he served as chairman of the Section on the Diseases of Children. In 1889 he was instrumental in organizing the Southern Surgical and Gynecological Association. In 1892 he was elected president of the Nashville Academy of Medicine, and in 1893 one of the honorary presidents of the Pan-American Medical Congress. He had been a faithful and unusually active and successful practitioner of medicine, and during the last ten or fifteen years has devoted most of his attention to surgery, in which he gained fame throughout the South. He also found time to devote to the teaching of his profession to thousands of students throughout the entire West and South, who will mourn his loss and revere his memory.

HIRAM CHRISTOPHER, M.D., University of Louisville, Ky., 1847, of St. Joseph, Mo., died January 21, after a long illness, aged 81. He was known as a scholar, and as an enthusiastic student of languages, and especially well versed in Greek. For a number of years he was dean of the Ensworth Medical College and he was at the time of his death, senior editor of the *Medical Herald*. At a meeting of the St. Joseph Medical Society, January 23, resolutions were adopted expressing the heartfelt sympathy and sorrow of the society at Dr. Christopher's death, and, as a mark of respect to his memory, the society adjourned.

GEORGE LESTER RUNDLE, M.D., New York University, 1890, was injured by a train at Delawanna, N. J., January 20, and died the next day at the Passaic, N. J., Hospital. He was a member of THE AMERICAN MEDICAL ASSOCIATION and surgeon of the Passaic General Hospital, as well as a member of the Passaic district and city societies.

DAVID CALDWELL IRELAND, M.D., University of Pennsylvania, 1861, died suddenly of heart failure consequent on la grippe, at his home in Baltimore, Md., aged 57. He had served as member of the city council, coroner and president of the pension examining board.

WILLIAM E. DAVIS, M.D., Meharry Medical College, Nashville, Tenn., 1887, a colored physician of Fort Worth, Texas, and a member of THE AMERICAN MEDICAL ASSOCIATION, died at his home in Fort Worth, January 1, from pneumonia. He was 39 years old.

E. P. ROSS, M.D., Manitoba Medical College, Winnipeg, 1900, who had recently returned from South Africa, invalided on account of enteric fever, died suddenly from la grippe, January 14, aged 28. He was house surgeon at St. Boniface Hospital, Winnipeg.

WILLIAM S. SMITH, M.D., University of Minnesota, 1892, of St. Clair, Minn., a member of THE AMERICAN MEDICAL ASSOCIATION, died from complications following an operation for acute appendicitis, at Rochester, Minn., January 18, aged 31.

EDWARD PINCKNEY BECTON, M.D., University of Tennessee, 1857, superintendent of the Texas State Asylum for the Blind and surgeon of the Twenty-second Texas Infantry C. S. A., died at Austin, January 14, from la grippe, at the age of 66.

HENRY W. LEONARD, M.D., Miami Medical College, Cincinnati, Ohio, staff surgeon of the Fifty-first New York Infantry, and for many years in practice at Camden, N. Y., died in New York City, January 14, after a long illness, aged 71.

LUTHER NEWCOMB, M.D., University of Vermont, 1885, and for thirteen years thereafter in practice in Lynn, Mass., died after a lingering illness, from Bright's disease, at his home in Montpelier, Vt., January 10, aged 39.

WILLIAM H. PARKHURST, M.D., Western College of Physicians and Surgeons, Fairfield, N. Y., 1841, one of the oldest physicians in the Mohawk Valley, died at his home in Frankfort, N. Y., January 22, aged 88 years.

JOSEPH C. HATHEWAY, M.D., Jefferson Medical College, Philadelphia, 1856, one of the oldest practicing physicians in Ottawa, Ill., died at his home in that city after an illness of six weeks, January 21, aged 67.

ABRAHAM BETTMAN, M.D., an old resident of Cincinnati, Ohio, and before his retirement, one of the leading physicians 1852 died at his home near Fisherville, Va., January 16, after a long illness, aged 95.

STEPHEN J. REYNOLDS, M.D., New York University, 1851, one of the oldest physicians of eastern Missouri, died at his home in Bowling Green, from acute nephritis, January 20, aged 76.

SAMUEL J. COYNE, M.D., University of Cincinnati, 1879, formerly a practitioner of Aberdeen, S.D., died from an overdose of medicine, January 21, at his home, opposite Dayton, Minn., aged 56.

JAMES WATSON, M.D., New York University, 1872, died January 23, at his home in Belleville, N. Y., suddenly, from heart failure as a sequel of la grippe. He was 67 years of age.

WALTER BUTTERBAUGH, M.D., State University of Iowa, 1897, died at Denver, Colo., December 25, from tuberculosis contracted while in practice in Riverside, Iowa. He was 31 years old.

ALEXANDER C. REID, M.D., University of Aberdeen, Scotland, 1865, a retired physician of Hamilton, Ont., died at his home in that city, from paralysis, January 18, aged 63.

WILLIAM J. HARRIS, M.D., Rush Medical College, 1866, a member of THE AMERICAN MEDICAL ASSOCIATION, died at his home, near Beatrice, Neb., January 26, aged 80.

GOTTLEIB MILLER, M.D., College of Physicians and Surgeons, Keokuk, Iowa, 1882, a specialist on the eye and ear, died at his home in Ottawa, Ill., January 12, aged 76.

JAMES BOYD MCKELVY, M.D., University of Pennsylvania, 1848, was killed by a fall from a window, at his home in Bloomsburg, Pa., January 14, aged 70.

N. M. BONHAM, M.D., Missouri Medical College, St. Louis, 1860, a pioneer physician and preacher of Missouri, died at New Franklin, Mo., January 18.

HENRY COTTON, M.D., University of Minnesota, 1894, died at St. Barnabas Hospital, Minneapolis, from typhoid fever, January 22, at the age of 33.

BURT ANDREWS, M.D., Bellevue Hospital Medical College, 1891, died at his home in Augusta, Me., from tuberculosis, January 12, aged 32.

JOHN A. GILBERT, M.D., University of Wooster, 1872, of Cleveland, Ohio, died January 22, after a prolonged illness from spinal disease.

STEPHEN M. BAYARD, M.D., died at his home in Ionia, Mich., January 17, from pneumonia, after an illness of ten days. His age was 81 years.

GEORGE A. LANDERS, M.D., University of Cincinnati, 1883, of Van Buren, Ind., died from paralysis, at Fortville, Ohio, January 18, aged 42.

WILLIAM F. COOK, M.D., Medical College of Ohio, Cincinnati, 1897, died from pneumonia, at his home in Latonia, Ky., January 17.

ALBERT L. WAGNER, M.D., College of Physicians and Surgeons, Chicago, 1885, recently died suddenly at his home in Lapaz, Ind.

GEORGE E. FULLERTON, M.D., University of Michigan, a retired physician of Marion, Iowa, died recently at his home in that city.

W. FRANK ROSS, M.D., Barnes Medical College, St. Louis, 1895, died at his home in Champaign, Ill., January 23, aged 44.

LUCIUS J. W. LEE, M.D., University of Pennsylvania, from pneumonia, at his home in Brooklyn, N. Y., January 8, aged 64.

ROLLIN E. BEACH, M.D., Missouri Medical College, 1872, died from typhoid fever, at his home in Vandalia, Ill., January 23.

THOMAS HENRY MCCORMICK, M.D., Harvard Medical School, Boston, at his home in Taunton, Mass., December 31, aged 25.

WILLIAM H. PLEUTHUR, University of Buffalo, N. Y., 1891, was found dead, January 17, aged 31.

JAMES MARCELLUS WATSON, M.D., Jefferson Medical College, 1852, died at his home, near Fisherville, Va., January 16, after a prolonged illness, aged 70.

Therapeutics.

Treatment of Dysmenorrhea.

The general practitioner is very frequently called upon to prescribe for the ailments during menstruation. The *Ther. Gazette* gives the following outline of treatment by Lyon for dysmenorrhea: Absolute rest in bed for twenty-four hours preceding the expected period; applications of hot compresses or poultices to the lower portion of the abdomen. Rub the skin of the abdomen with the following liniment:

℞. Ext. belladonnæ fl.		
Ext. hyoscyami fl., āā	℥i	4
Linimenti camphoræ	℥iii	96

M. Sig.: To be applied externally.

In some cases rectal injections are recommended:

℞. Tinct. opii	m. x	66
Aquæ amyli, q. s. ad	℥vi	192

M. Sig.: As an enema to relieve the pain; or:

℞. Infusi valerianæ	℥ii	8
Aquæ, q. s. ad	Oi	500

M. Sig.: As an enema.

If the menstrual flow is excessive:

℞. Ergotin	gr. ii	12
Quininæ sulphatis	gr. i	06
Pulveris digitalis	gr. ss	03

M. Ft. pil. No. i. Sig.: Take one such pill two or three times a day; or:

℞. Ext. hydrastis fl	℥i	32

Sig.: Thirty to sixty drops to be taken in sweetened water once or twice daily.

In other cases he employs the tinture of viburnum prunifolium in the following combination:

℞. Tinct. viburni prunifolii		
Tinct. piscidiæ erythrinæ, āā	℥ss	16

M. Sig.: Twenty drops four or five times a day.

Piscidia is an unofficial preparation derived from the bark of Jamaica dogwood. Its action upon the nervous system is similar to opium. It is used as a nerve sedative and for the different forms of neuralgias. He also recommends the following for the same conditions:

℞. Antipyrini		
Potassii bromidi, āā	℥i	4
Ext. viburni prunifolii	℥iii	12
Spiritus vini gallici		
Syrupi aurantii flor., āā	℥ss	16
Aquæ destil.	℥ii	64

M. Sig. One dessertspoonful two or three times a day.

Antipyrin is preferable to other coal-tar products such as acetanilid, because it does not produce the changes in the blood that follow the administration of acetanilid. Brunton states that acetanilid must be used with care in the treatment of such conditions.

If the flow is not abundant but difficult, hot sitz baths to which mustard has been added is recommended, or mustard applied to the anterior abdominal wall. In such conditions he gives the following:

℞. Asafetidæ	gr. ii	12
Ext. valerianæ	gr. i	06
Ext. cannabis indicæ	gr. ss	03

M. Ft. Pil. No. i. Sig.: One, two, or three a day; or:

℞. Sodii salicylatis	℥ii	8
Rum	℥iss	48
Aquæ destil., q. s. ad	℥iii	96

M. Sig.: One teaspoonful three times a day.

Chronic Alcoholism.

To meet the different symptoms present in chronic alcoholism Dr. Daniel R. Brower recommends the following outline of treatment to replace the stimulant:

℞. Tinct. capsici		
Tinct. nucis vom., āā	℥iv	16
Tinct. cinchonæ comp., q. s. ad	℥iii	96

M. Sig.: One teaspoonful every four hours.

TO PRODUCE SLEEP.

℞. Chloralis hydratis,		
Potassii bromidi, āā	℥iii	12
Ext. glycyrrhizæ fl	℥i	32
Syr. simplicis, q. s., ad	℥iii	96

M. Sig.: One dessertspoonful at night.

Careful attention must be given to the nourishment and elimination. He advocates the frequent administration of beef tea well seasoned with capsicum. The beef tea can be made of some of the prepared and reliable extracts now upon the market. Elimination by the skin, kidneys and bowels should be carefully observed. For the latter he recommends the following as a cathartic:

R. Pil. cath. comp. Sig.: One or two pills as needed to keep the bowels in good condition.

Chapman recommends the following pill in chronic alcoholism:

℞. Zinci oxidi	℥i	4
Piperini	℈i	1 33

M. Ft. pil. No. xx. Sig.: One pill three or four times a day.

Acute Alcoholism.

The following combination is recommended by Gerhard:

℞. Tinct. capsici		
Tinct. zingiberis		
Tinct. valerian. ammon.		
Tinct. gentianæ comp., āā	℥i	32

M. Sig.: One dessertspoonful in a cup of hot water three or four times a day.

Treatment of Delirium Tremens.

Dr. C. G. Stockton, in *Amer. Therapist*, advises the administration of an efficient purgative followed by:

℞. Potassii bromidi	℥i	4
Chloralis hydratis	gr. xxx	2

M. Sig.: At one dose, unless the condition of the patient's heart should require a smaller dose. If it is deemed necessary the above dose may be repeated. For the heart, if it should show signs of failure, he recommends digitalis. Alcohol should not be permitted in any form, but in its stead stimulation and nourishment, as beef tea with capsicum. Strychnin and nitroglycerin may be of better use in some cases than digitalis. As a cathartic he recommends aloin in half-grain doses administered hypodermically. By this means good evacuation of the bowels will be produced. Hyoscin hydrobromate can be given in 1/100 grain dose to quiet the delirium, but should be used with great care and is of advantage only when the delirium is a temporary one.

Tubercular Laryngitis.

In the later stages of tubercular laryngitis the following insufflation for the relief of pain, which is usually severe, and the restoration of the voice, may be given:

℞. Iodoformi	℥ii	8
Cocainæ hydrochloratis	gr. iss	09
Morphinæ hydrochloratis	gr. ss	03

M. Sig.: A small amount to be insufflated by the patient with a bent glass tube to relieve the pain.

Treatment of Chlorosis.

Two of the important factors to be observed in the treatment of chlorosis, as in the secondary anemias, are rest in bed and the relief of constipation. It has been demonstrated clinically that the increase in hemoglobin has been as rapid in chlorotic girls who were put to bed with the proper attention to elimination by the bowels as in the cases where ferruginous preparations were administered and permitting them to

follow their ordinary vocations. As a laxative, a pill containing aloes in combination with other drugs certainly takes the first rank. Aloes acts more especially upon the lower bowel. Colonic flushings, using the normal salt solution, should be resorted to occasionally. As hematinics, the iron and arsenic preparations take the lead. Dr. Frank Billings thinks the tinctura ferri chloridi is probably preferable to any other preparation in the treatment of the anemias. He recommends it to be given as follows:

R.	Tinct. ferri chloridi		
	Glycerini, āā	℥i	32
	Aquæ destil., q. s. ad.....	℥iii	96

M. Sig.: One teaspoonful three times a day, well diluted in water.

He further states that perhaps patients have some apprehension as to its effects upon the teeth when administered in the form of the tincture, although the decay is more probably due to the anemic condition of the patient. He emphasizes the importance of giving it in large doses. It seems that his statement is a proper one, if, as Wilcox states it, iron administered in any form is taken up by the system and circulates as the chlorid. Notwithstanding this statement, personal experience with the Fleischl hemometer in the frequent examination of blood has shown the great value of the Blaud pill in such cases, combined as follows:

R.	Ferri sulphatis		
	Potassii carbonatis, āā 3i	4	
	Acidi arsenosi .....gr. i		06

M. Ft. capsulæ No. xxx. Sig.: One capsule after each meal three times a day.

The organic preparations of iron which are upon the market certainly do not improve the blood as rapidly as iron administered as above.

Sir Andrew Clarke's idea that chlorosis is caused by gastro-intestinal stasis and resulting autointoxication has led to the employment of saline purgatives and intestinal antiseptics. He recommended the following:

R.	Ferri sulphatis .....gr. xxiv	1	5
	Magnesii sulphatis .....℥vi	24	
	Acidi sulph. arom.....3i	4	
	Tinc. zingiberis 3ii	8	
	Infusi quassiæ, q. s. ad.....℥viii	256	

M. Sig.: Two tablespoonfuls twice daily; or:

R.	Ferri sulphatis .....gr. xxiv	1	50
	Sodii bicarbonatis 3ii	8	
	Sodii sulphatis 3vi	24	
	Tinct. zingiberis.....3ii	8	
	Spts. chloroformi 3i	4	
	Infusi quassiæ, q. s. ad .....℥viii	256	

M. Sig.: Two tablespoonfuls twice daily, at eleven and six o'clock.

For chlorotic amenorrhea, the following pill is well recommended:

R.	Ferri phosphati 3i	4	
	Pulveris aloes .....gr. xv	1	
	Quininæ hydrochloridi		
	Ergotini, āā.....3ss	2	

M. Ft. pil. No. lx. Sig.: One pill four times a day.

This pill possesses the properties of a laxative, hematinic, tonic and uterine stimulant, all of which are certainly indicated in the treatment of such conditions.

Medicolegal.

Must Order Trial of Sanity on Physician's Affidavit.—The Supreme Court of Georgia holds, in Sears vs. State, that when a practicing physician has made an affidavit that a person who has been convicted in a superior court of that state for the crime of murder, and has been sentenced by the judge of that court to be hanged, has been by the affiant examined since the sentence and conviction, and discovered to be, at the time of the examination and of making his affidavit, insane, and in such mental condition that the question of his sanity should be tried before a jury under the terms of the law, and when this affidavit has been duly presented to the judge for the purpose of procuring a trial on the question of the sanity of such a convict by the superior court of the county in which he has been sentenced, it is the imperative duty of the judge to order such trial, and to have a jury impaneled, as provided by the statute, for the determination of this question.

Effect of Judgment for Services on Malpractice Case.—The Supreme Court of Tennessee was cited, in the case of Sale vs. Eichberg, to two apparently conflicting classes of cases as to the effect of a recovery by a physician of a judgment for services on a subsequent action by the patient for malpractice. An examination of these cases, however, the court says, will show that they are distinguishable in this important attribute: that, where the judgment for fees is by default, no estoppel, as it is called, arises—that is to say, the judgment is no bar to an action by the patient to recover damages for malpractice; but where there is a judgment for fees on the merits, or a confessed judgment, the matter is *res adjudicata*, as it is termed, and it will bar a subsequent action for malpractice. The supreme court also holds here that in a malpractice case where a practicing physician is called as a witness for the plaintiff and quite freely expresses his opinion in respect of good practice and proper treatment in such cases, the defendant is entitled to test the knowledge of the witness, notwithstanding he disclaims being an expert, by reading or having him read, extracts from standard medical works, on diagnosis and treatment in such cases, and asking the witness whether he agrees or disagrees therewith, and then by comparing his opinion with those of the writer. An instruction for the jury that the law fixes the standard by which the injury shall be measured in a malpractice case, which is "full and complete and ample compensation to the injured person," the court pronounces objectionable, in repeating, and thus emphasizing, to stimulate the jury in assessing damages beyond the rule of simple compensation; the true rule in such cases being compensation.

Construction of Warranty That No Brother Had Died.—The case of the Globe Mutual Life Insurance Association vs. Wagner was certified to the Supreme Court of Illinois as involving questions of such importance that it should be passed upon by that tribunal. An applicant for a policy of life insurance had been asked in his medical examination: "How many brothers dead?"—and answered, "None." At the end of the series of questions and answers, which included the foregoing, he signed a declaration and warranty that the answers were true, and that said answers and the statements made in his application, together with this warranty, should form the basis of any contract of insurance that might be entered into between him and the association. But the evidence, when the policy issued was sued on, showed that a brother of the insured had died in London, England, more than four years prior to the date of the application for insurance, though there was no evidence tending to show that the insured ever knew of his brother's death. Did this invalidate the policy? The Supreme Court of Illinois holds that it did not. It maintains that the answer here in question should be held to be a representation, and not a warranty, and that, in the absence of proof by the company of fraud or intentional misstatement on the part of the insured, the policy was not rendered invalid merely because the answer proved to be false. It says that, in the absence of explicit, unequivocal stipulations requiring such an interpretation, it should not be inferred that the insured or his mother, who was his beneficiary and also signed an application for the policy and made the agreements and warranties in the medical examination hers as fully as if she had signed the same, took a life policy with the distinct understanding that it should be void if any statements made in the medical examination should be false, whether the insured was conscious of the falsity thereof or not. Whether or not the insured knew of the death of his brother at the time of the application for insurance was a question for the jury. To hold that, as a precedent to any binding contract, he should guaranty absolutely that none of his brothers were dead would be unreasonable, in the absence of a more explicit stipulation than here appeared. It not infrequently happens that a man loses trace

of all or a part of his relations, and to hold him to absolute guarranty that they were living, in order that he might obtain insurance, would sometimes be impossible, and almost absurd.

Disclosures in Death Certificate Privileged.—The Court of Appeals of New York holds, in the case of Davis vs. the Supreme Lodge, Knights of Honor, that, in an action on a benefit certificate, the cause of death of a relative of the insured, as of an aunt, can not be shown by the certificate of death filed by the attending physician. The court says that it has held that the statements of the attending physician, for the purpose of establishing the cause of death, either of the insured himself or of his ancestors or their descendants, although not parties to nor beneficiaries under the contract, are not admissible. They are excluded not only for the purpose of protecting parties for the disclosures of information imparted in the confidence that must necessarily exist between patient and physician, but on grounds of public policy as well. The disclosure by a physician, whether voluntary or involuntary, of the secrets acquired by him while attending upon a patient in his professional capacity, naturally shocks our sense of decency and propriety, and this is one reason why the law forbids it. The form in which the statements are sought to be introduced is of no consequence, whether as a witness on the stand or through the medium of an affidavit or certificate. All are equally under the band of the statute. Nor does the court consider that section 834 of the New York code, which expressly prohibits disclosures of information acquired by a physician in his professional capacity, when the relation of physician and patient existed, was repealed by implication by the provision in the charter of the city of New York of 1897, providing that the organization of the health department of the city, and that authenticated copies of the record of the proceedings of the board of health and books and papers constituting part of its archives shall be presumptive evidence in any court of justice or judicial proceeding, when they may be relevant to the point or matter in controversy. It may well be, the court says, that the records are competent to prove the fact of death, or prove marriages or births. It is quite possible that in some cases they might be competent on questions relating to pedigree. These facts could always, at common law, be established by a species of hearsay evidence; but the cause of death in a litigation between private parties, concerning the obligations of a contract of life insurance, must be established, when material, by common-law proof.

Indictment Where Practicing Medicine Is Defined.—Section 1477 of the Political Code of Georgia defines what persons shall practice medicine in that state. Section 1478 declares: "For the purpose of this chapter, the words 'practice medicine' shall mean, to suggest, recommend, prescribe or direct, for the use of any person, any drug, medicine, appliance, apparatus, or other agency, whether material or not material for the cure, relief, or palliation of any ailment or disease of the mind or body, or for the cure or relief of any wound, fracture, or other bodily injury or deformity, after having received or with the intent of receiving therefor, either directly or indirectly, any bonus, gift, or compensation." The indictment in Blalock vs. State charged the former with the offense of a misdemeanor, "for that the said O. C. Blalock, on the 24th day of August, in the year 1900, in the county aforesaid, did then and there unlawfully and with force and arms practice medicine, without then and there being authorized to do so either by diploma from an incorporated medical college, medical school, or university, nor after having attended one or more full terms at a regularly chartered medical college, having been in the active practice of medicine since the year 1866, nor being then and there authorized to practice medicine in 1866, nor having been then and there licensed by the medical board; contrary to the laws of said state," etc. Now, this indictment the Supreme Court of Georgia holds, not only substantially complied with the provisions of sections 485 and 486 of the Penal Code of Georgia, upon which it was based, but was not defective in not alleging that the accused did illegally practice medicine with the intent of receiving, or after having received, directly or indirectly, any gift, bonus, or compensation for his services in prescribing, suggesting, or recommending any drug, medicine, appliance, apparatus, or other agency for the cure of disease. It says that this indictment charged the accused with unlawfully practicing medicine. What "practicing medicine" means is defined by section 1478 above quoted. Every person is supposed to know the law. Therefore, the accused was presumed to have known what was meant by the term "practice medicine" under the state code. In other words, the court holds that since, by statutory defination, the words "practice medicine" embrace the idea of exacting compensation; an indictment charging that the accused did unlawfully "practice medicine," and expressly negativing his having any of the qualifications essential to the lawful practice of medicine set forth in Section 1477 of the Political Code, is good in substance, and will support a conviction, although there be no allegation that the accused received or intended to receive compensation.

Miscellany.

The Psychic Equivalent of Epilepsy.—Recently a contractor suddenly lost all remembrance of self-consciousness from Friday at noon in New York City until he found himself in the Buffalo General Hospital the following Wednesday evening. The last remembered by him is that, being worried about an invalid wife and also feeling mentally exhausted from a very trying political campaign, he entered the elevated train to go to his home in New York City. During the time of his loss of self-consciousness he undertook a railway journey from this city to Buffalo. He was found by the police, aimlessly wandering about the streets, and was sent to the Buffalo General Hospital, service of Dr. Charles Cary. During the time he was in the hospital, it was impossible to get any account from him, but he repeatedly called for his wife and for the senator in whose behalf he worked so assiduously during the campaign. Wednesday night he regained consciousness, and was much surprised to find himself in Buffalo. He gave a history of a father who died of apoplexy, and a brother who, as a young boy, had fainting attacks. He had himself, while driving last summer, struck his head, was unconscious for three hours, and had a paresis of the right side.

The Roentgen Ray in Military Surgery.—In the annual report of the surgeon-general of the army for the year ended June 30, 1899, it was stated that a special report on gunshot injuries, in which the Roentgen ray was used, was being prepared by Capt. W. C. Borden, assistant-surgeon, U. S. A. This has just been issued from the surgeon-general's office as a handsome quarto volume of 98 pages, with 38 plates and many other illustrations. Seventeen X-ray machines were available for use during the Spanish-American War; 5 were static and 12 coil machines operated by primary batteries. The former were considered best suited for work at permanent hospitals where no dynamo current was available; the latter for the base and general hospitals of war service. In the Spanish-American War the apparatus was supplied only to general hospitals and hospital ships. The reasons for not making use of it in the field-hospitals are stated as: 1. Lodged bullets require immediate removal only in extremely rare instances. 2. The environments of and conditions incident to movable field-hospitals render asepsis in operating practically impossible and, in consequence, in field-hospitals non-interference with wounds should be practiced to the utmost extent possible. 3. Surgical interference with lodged bullets, except where adequate asepsis is available or the necessity urgent, is to be condemned, as the suppuration which follows is much more detrimental to the patient than the presence of the lodged missile. 4. A Roentgen ray apparatus in the field is an additional incentive to surgeons to operate under conditions not adequately aseptic. The report shows clearly that in non-infected wounds extensive comminution of bone is not as a rule an indication for operative intervention; that where there is infection complete cleansing of the wound and removal of all loose bone fragments followed by drainage, antiseptic dressings and irrigation, usually suffice, and that excision or amputation is to be resorted to only in extreme cases.

Idiosyncrasy Not a Factor in X-Ray Dermatitis.—R. Kienboeck, who has had years of experience with the *x*-rays at the Vienna Roentgen Institute, announces that the effects of Roentgen treatment, the causation of dermatitis, etc., vary with the kind of tube employed and not with the individual subject. The Roentgen rays which chemically affect the sensitized plate are the essential element in Roentgen treatment and, if in excess, the dangerous factor. Individual predisposition varies in very narrow limits; the young react more strongly than older persons. The quantity of the rays generated and their intensity, the duration of the exposure and the distance of the tube from the tissues, must all be taken into account. He accepts as a standard exposure that which causes a simple, transient alopecia, with *restitutio ad integrum* in four to eight weeks. Exposure producing an exudative inflammation is tenfold the standard, and exposure followed by an intractable ulceration is thirty to fifty times the normal standard. Rays of less penetrating power, such as are produced in soft and medium soft—"good"—tubes, have a more intense action than those from hard tubes: 1, because the latter send out less Roentgen rays, and 2, because they give a very penetrating light. He urgently warns persons occupied with the Roentgen treatment not to expose themselves in any way to the chemically active Roentgen rays, but keep out of their limited and well-defined range of action. He tabulates twenty cases of *x*-ray injuries, all but two published before. One of the latter is a confrère engaged in Roentgen therapy, who acquired a "Roentgen hand," which resulted in a deep, extensive ulceration of the back of the hand. It has resisted, for a year, all the treatments applied. The other case is an ulceration of the hypogastrium after exposure to a "good" tube for seventy-eight minutes in three sittings. Unna has recommended as a protective measure for operators the application of a thick coating of zinc jelly containing 10 per cent. cinnabar and bismuth oxychlorid.

Societies.

RIVERSIDE COUNTY (Cal.) MEDICAL SOCIETY.—This Society held its quarterly session at Riverside and elected Dr. Ashley S. Parker, president, and Dr. Louise Harvey Clarke, secretary, both of Riverside.

ROME (N. Y.) MEDICAL SOCIETY.—At the annual meeting, held January 15, Dr. Arthur A. Gillette was elected president; Dr. Howard J. Teller, vice-president; Dr. Thomas P. Scully, secretary, and Dr. Gilbert N. Lehr, treasurer.

BLACKHAWK COUNTY (Iowa.) MEDICAL SOCIETY.—At the meeting, January 22, at Waterloo, Dr. Ernest J. Waddey was elected presjdent; Dr. Henry W. Brown, vice-president, and Dr. Fred W. Keehl, secretary and treasurer.

CLARK COUNTY (Ky.) MEDICAL SOCIETY.—At the January 12 meeting of this Society, Dr. Oliver R. Venable, Winchester, was elected president; Dr. R. Browne S. Ishmael, Winchester, secretary, and Dr. John A. Snowden, Wade's Mill, treasurer.

REDLANDS (Cal.) MEDICAL SOCIETY.—The annual meeting and election of officers was held January 15, with the following result: Dr. George H. Scott, president; Dr. Charles C. Browning, vice-president, and Dr. J. E. Payton, secretary.

SKAGIT COUNTY (Wash.) MEDICAL SOCIETY.—The recent election of officers resulted as follows: Dr. M. B. Mattice, Sedro-Wooley, president; Dr. Winston Appleby, Laconner, vice-president, and Dr. Charles C. Harbaugh, Sedro-Wooley, secretary.

RICHMOND COUNTY (N. Y.) MEDICAL ASSOCIATION.—At the annual meeting held January 14, Dr. Jefferson Seales was elected president; Dr. C. Wilmot Townsend, vice-president, and Dr. Henry C. Johnston, secretary and treasurer, all of New Brighton.

TAYLOR COUNTY (W. Va.) MEDICAL SOCIETY.—At the January 18 meeting at Grafton, Dr. Alfred R. Warden was elected president; Dr. Achbor J. Baker, vice-president; Dr. Rawley H. Powell, secretary, and Dr. William F. Van Kirk, treasurer, all of Grafton.

SPRINGFIELD (Ohio) ACADEMY OF MEDICINE.—At the meeting of the Academy, January 6, the following officers were elected: Dr. Theodore F. Bliss, president; Drs. Noah Myers and Stanley R. Hutchings, vice-presidents, and Dr. Charles L. Minor, secretary and treasurer.

WHITE COUNTY (Tenn.) MEDICAL SOCIETY.—At the January 8 meeting, Dr. I. L. Davis, Darkey Springs, was elected president; Dr. William B. Young, Bonair, secretary; Dr. R. E. Lee Smith, Doyle Station, corresponding secretary, and Dr. D. R. Gist, Sparta, treasurer.

NEW BRITAIN (Conn.) MEDICAL SOCIETY.—The members of the Society opposed to the hospital management, met January 15 and elected officers as follows: Dr. Herman Strosser, president; Dr. Robert M. Clark, vice-president, and Dr. Louis Smirnow, secretary and treasurer.

LACKAWANNA (Pa.) MEDICAL SOCIETY.—The annual meeting was held at Scranton, January 8, at which the following officers were elected: Dr. Walter M. Reedy, president; Drs. Addison W. Smith and Joseph F. Grant, vice-presidents; Dr. Lucius C. Kennedy, secretary, and Lowell M. Gates, treasurer, all of Scranton.

ATLANTIC CITY (N. J.) ACADEMY OF MEDICINE.—The annual election was held January 11. Dr. Edward A. Reiley was chosen president; Dr. J. Addison Joy, vice-president; Dr. A. Burton Shimer, secretary; Dr. Walter Reynolds, treasurer, and Drs. Edward A. Reiley, Elisha C. Chew and Albert D. Cuskaden, board of governors.

WASHINGTON COUNTY (R. I.) MEDICAL SOCIETY.—At the annual meeting, held at Westerly, January 17, Dr. William A. Hilliard, Westerly, was elected president; Dr. Rowland R. Robinson, Wakefield, first vice-president; Dr. C. Grant Savage, Westerly, second vice-president, and Dr. J. Howard Morgan, Westerly, secretary and treasurer.

WARREN COUNTY (Pa.) MEDICAL SOCIETY.—A meeting was held at North Warren, January 15, at which the following officers were elected: Dr. James Gass, Sheffield, president; Drs. Joseph J. Knapp, Kinzua and William M. Robertson, Warren, vice-presidents; Dr. James R. Durham, Warren, secretary, and Dr. William V. Hazeltine, Warren, treasurer.

DELAWARE COUNTY (Pa.) MEDICAL SOCIETY.—This Society met at Chester, January 12, and elected Dr. George D. Cross, Chester, president; Dr. Conrad L. Partridge, Ridley Park, vice-president; Dr. Linnaeus Fussel, Media, secretary; Dr. Daniel W. Jefferis, Chester, treasurer; Dr. Maurice A. Neufeld, Chester, reporter, and Dr. Samuel Trimble, Lima, librarian.

OPHTHALMOLOGICAL AND OTOLOGICAL SOCIETY OF WASHINGTON (D.C.).—The thirty-fifth session was held at the residence of Dr. William H. Fox, January 9, Dr. Stephen O. Richey, president, in the chair. Papers were read by Dr. William H. Fox on "Retinal Hemorrhage," and by Dr. Anton Coe on "The Use of Electricity in Ophthalmic and Aural Practice." Both were fully discussed by the members.

CUMBERLAND COUNTY (Pa.) MEDICAL SOCIETY.—At the meeting in Carlisle, January 8, the following officers were elected: Dr. Milton M. Dougherty, Mechanicsburg, president; Drs. George C. Borst, Newville, and David W. Camp, Plainfield, vice-presidents; Dr. Hildegarde Longsdorf, Carlisle, secretary; Dr. Enos K. Lefever, Boiling Springs, corresponding secretary, and Dr. John W. Bowman, Lemoyne, treasurer.

EASTERN OHIO MEDICAL ASSOCIATION.—This Association met at Steubenville, January 8, and elected Dr. Samuel B. McGavran, Cadiz, president; Drs. Walter S. Spence, Germano, Arthur B. Holland, Wellsville, John A. Hobson, Flushing, and Robert Laughlin, Steubenville, vice-presidents; Dr. James C. M. Floyd, Steubenville, corresponding secretary, and Dr. Joseph F. Purviance, Steubenville, recording secretary.

MIDDLESEX SOUTH DISTRICT (Mass.) MEDICAL SOCIETY.—The golden anniversary of this Society was held in Boston, January 16. The following officers were elected: Dr. Charles H. Cook, Natick, president; Dr. Eugene G. Hoitt, Marlboro, vice-president; Dr. Albert August, Cambridge, secretary; Dr. Walter Ela, Cambridge, treasurer; Dr. E. Scott Dow, Allston, librarian, and Dr. Alfred Worcester, Waltham, commissioner of trials.

BURLINGTON COUNTY (N. J.) MEDICAL SOCIETY.—At the annual election held in Mount Holly, January 18, the following officers were chosen: Dr. William P. Melcher, Mount Holly, president; Dr. Irving Hollingshead, Moorestown, vice-president; Dr. Addison W. Taylor, Beverly, secretary; Dr. Enoch Hollingshead, Pemberton, treasurer; Dr. Irene D. Young, Bordentown, historian, and Dr. Richard H. Parsons, Mount Holly, censor.

ALLEGHENY COUNTY (Pa.) MEDICAL SOCIETY.—At the quarterly meeting held in Pittsburg, January 15, the following officers were elected: Dr. John S. Mabon, Allegheny, president; Dr. Ferdinand Koeller, Pittsburg, vice-president; Dr. Clyde O. Anderson, Pittsburg, corresponding secretary; Dr. Edward Stieren, Pittsburg, recording secretary; Dr. Ewing W. Day, Pittsburg, treasurer, and Dr. Edward B. Heckel, Pittsburg, censor.

LEHIGH COUNTY (Pa.) MEDICAL SOCIETY.—The annual meeting and banquet were held at Catasauqua, January 8. The following officers were elected: Dr. Martin J. Backenstoe, Emaus, president; Drs. Albert J. Erdman and William W. Eschbach, Allentown, vice-presidents; Dr. Philip L. Reichard, Allentown, recording secretary; Dr. James L. Hornbeck, Catasauqua, corresponding secretary, and Calvin J. Otto, Allentown, treasurer.

LYCOMING COUNTY (Pa.) MEDICAL SOCIETY.—At the annual meeting, held at Williamsport, January 11, Dr. Joseph W. Albright, Muncy, was elected president; Dr. Robert H. Milnor, Warrensville, vice-president; Dr. Charles M. Adams, Williamsport, secretary, Dr. Wesley F. Kunkle, Williamsport, treasurer, and Dr. Horace G. McCormick, Williamsport, censor. Delegates to THE AMERICAN MEDICAL ASSOCIATION and the State Medical Society were also appointed.

BERKS COUNTY (Pa.) MEDICAL SOCIETY.—At the annual meeting held in Reading, January 8, Dr. Samuel S. Hill, Wernersville, was elected president; Drs. Fremont W. Frankhauser, and Adam B. Dundor, Reading, vice-presidents; Dr. S. Banks Taylor, Reading, corresponding secretary; Dr. James W. Keiser, Reading, recording secretary, and Abraham S. Raudenbush, Reading, treasurer. Delegates to THE AMERICAN MEDICAL ASSOCIATION were appointed on this occasion.

CLEVELAND (Ohio) MEDICAL SOCIETY.—At the ninth annual meeting, held January 11, the retiring president, Dr. Henry S. Upson, in his address, strongly recommended that the medical societies of the city be merged into one and that the medical library building be the general headquarters. Dr. Charles F. Hoover was elected president; Dr. Henry W. Rogers, first vice-president; Dr. Robert Pollock, second vice-president; Dr. John N. Lenker, secretary, and Dr. John M. Ingersoll, treasurer.

WILL COUNTY (Ill.) MEDICAL SOCIETY.—At the meeting January 15, a committee was appointed, consisting of the president, Dr. Minnie K. Bowles, and the secretary, Dr. Ezra R. Larned, to consult with the senator and state representatives from this district regarding medical legislation in favor of needed reforms. The committee will choose a third member to act with it. Dr. Minnie K. Bowles, Joliet, was elected president; Dr. Roland H. Henry, Peotone, vice-president, and Dr. Ezra Reed Larned, Joliet, secretary and treasurer.

TEXAS CENTRAL MEDICAL ASSOCIATION.—The fifteenth annual session of this Association was held at Fort Worth, January 8 and 9. The following section chairmen were selected: Dr. M. P. McElhannon, Belton, general medicine; Dr. William T. McNeill, Valley Mills, surgery; Dr. Scurry L. Terrell, Dallas, ophthalmology and otology; Dr. Hatch W. Cummings, Hearn, neurology and medical jurisprudence, and Dr. Frank D. Thompson, Fort Worth, obstetrics and gynecology. Dr. Nelson A. Olive, Waco, was elected president; Drs. Edgar D. Capps, Fort Worth, and William B. Anderson, Brownwood, vice-presidents, and Dr. William R. Thompson, Fort Worth, secretary-treasurer. Temple was selected as the next place of meeting.

CHICAGO NEUROLOGICAL SOCIETY.

Regular Meeting held Dec. 20, 1900.

Dr. Hugh T. Patrick, vice-president, in the chair.

Hematology of Neurasthenia.

DR. CHARLES F. LODOR presented the results of a study in the hematology of neurasthenia. The article will appear in THE JOURNAL.

Polioencephalitis Superior.

DR. ARCHIBALD CHURCH reported a case of this affection in a male 31 years of age. The patient was a cashier and had been married five years, with no children. The family history presented several cases of tuberculosis; otherwise it was negative. The personal history was also without notable incident, and venereal history was denied. For several years, however, he had used alcohol and tobacco freely, working very hard, with short hours of sleep, but considerable outdoor athletic exercise. Aug. 19, 1899, in a very hot sun, he played golf all day, without any head covering. His forehead, face and scalp were severely burned and the hair bleached by the sun. On the second day thereafter he noticed dimness of vision in both eyes, was compelled to hold a book at a distance, and there was also a little double vision. Examination of the eyes by competent oculists failed to detect any trouble in the fundus. There was, however, a tendency to outward squint and some rigidity of the pupils. He was given mercury by inunctions. Two weeks later he came under observation, showing a slight ptosis on the left side, outward deviation of both eyes, and the pupils rigid to light and accommodation. Headache, vomiting, dizziness and other subjective disturbances were absent. The temperature, pulse, respiration, urine and blood were normal. He showed a little tendency to oversleep and, during the day, would drop asleep while driving. He also impressed others as being a little indifferent to subjects of ordinary interest, and was so as to the gravity of his condition. After twenty daily inunctions, a slight amount of disturbance appeared in the gums and the mercury was discontinued. On the thirtieth day after the onset of the symptoms, his speech was a little muffled and there was some incoördination when walking with the eyes closed. The tendon reflexes, which previously had been normal, showed increase, and there was a slight ankle-clonus on each side. During the night he had involuntary urination. On the thirty-first day the divergent squint subsided, apparently through paresis of the external recti or involvement of the nuclei of the sixth nerve, and the pupils commenced to dilate. Vision for distance was still normal, but there was no accommodative capacity and the pupils responded to neither light nor accommodation. Static ataxia was decidedly pronounced. The temperature had a slight subnormal tendency. There was mental hebetude. On the thirty-second day he was unable to stand, his pupils were dilated to the maximum, the eyes perfectly immobile, and ptosis on both sides partially developed. The temperature ran up to 100.2 F. The next day double ptosis was complete and reflex excitability greatly increased so that the patient was almost tetanized as he lay apathetically in bed. Babinski's sign was noted on both sides. The temperature was 101.2 and the pulse 120. The next day all conditions were worse and there was some difficulty in swallowing, with coma most of the day. The following day the temperature rapidly ascended to 108 F. with, at the same time, a falling pulse, and he died after twenty-four hours of absolute coma.

The post-mortem examination was absolutely negative, except that there were healed foci of tuberculosis in each apex, about as large as a walnut. An examination of specimens and serial sections was made by Dr. Fütterer, showing areas of more or less well-outlined softening in the corpora quadrigemina, pons, peduncles, internal and external capsule, principally on the right side. The area in the external capsule involves the claustrum in its anterior portion, with an upward extension to the lower level of the cortex. The lesions in the peduncles are confined to their lower parts and are small, while others involve the nuclei of the oculomotoris, trochlearis and abducens. Changes are decidedly inflammatory and blood-vessels thickly surrounded by masses of leucocytes appearing in the midst of areas of degeneration. Here and there is also well-developed hyaline degeneration of the walls of the blood-vessels.

Dr. Church called attention to the fact that a series of cases showing graduations between acute polioencephalitis and asthenic bulbar paralysis or myasthenia gravis could be adduced from experience and the literature, and that in this case the sequence of events might perhaps be considered as follows: A tubercular lesion inducing some hyaline degeneration in the cerebral vessels; subsequently traumatism in the shape of sunburn; the action of toxic or infectious agencies producing inflammatory changes in an area of lowered resistance, and polioencephalitis with additional foci of inflammatory disturbance.

DR. CHURCH, in the formal discussion which followed his paper, suggested the possibility of a series of pathologic conditions in which polioencephalitis formed one end and myasthenia gravis the other.

DR. SANGER BROWN thought that this could hardly be the case, as the tendency of myasthenia gravis is toward recovery.

DR. HUGH T. PATRICK agreed with Dr. Church, and showed sections from a case which apparently occupied middle ground between the two conditions mentioned. His sections through various areas of the cerebrospinal axis everywhere showed vast engorgement of the capillaries and possibly some early degeneration of cells, the patient dying before further destruction had taken place.

CHICAGO PATHOLOGICAL SOCIETY.

Regular Meeting held January 14.

President L. Hektoen in the chair.

Tissue Changes from Diplococcus Scarlatinae.

DR. E. R. LE COUNT made a report on the histologic changes found in the tissues of animals inoculated with diplococcus scarlatinæ (Class). The changes described differ only in degree from those described by Pearce and others in persons who die from scarlet fever, the most notable difference being the lack of lesions in the kidneys in the animals. Hyperplasia of lymphoid tissue, focal necroses and plasma cells in situations that betoken their presence in the blood were found in the animals inoculated.

DR. W. H. WILDER read a paper on "Tuberculosis of the Iris," and showed specimens from a case observed by him.

DRS. D. R. BROWER and H. GIDEON WELLS reported a case of paralysis of the cranial nerves of the left side, from the fifth to the twelfth inclusive. This paralysis had come on in the course of a few months and then remained stationary for twelve years. At no time were there pressure symptoms. On account of the history, coupled with a slight improvement under iodids and the occurrence of twelve miscarriages, a syphilitic lesion involving the meninges and producing an infranuclear paralysis was diagnosed. Death resulted from nephritis. At autopsy a tumor was found in the dura, exactly as located clinically, involving the left petrous bone. Microscopically it was found to be an endothelial tumor, the periendothelioma of Borrmann, with some spiculæ of bone and many multinuclear and uninuclear giant cells. Microscopically it somewhat resembled a psammoma.

Periosteal Chondrosarcomas.

DR. PAUL F. MORF presented gross and microscopic specimens of three periosteal chondrosarcomas. One of the tumors was from a boy of 13, and had developed on the tibia shortly after a contusion of that bone. The other two occurred in young adults, one in a female, aged 21 years, and the last in a male, aged 19 years. These two latter tumors were found to have grown from the lower end of the femur. Microscopically the neoplasms all appeared as firm, hard, inelastic, grayish-white masses. Scattered throughout their substance were numerous islets, which looked to the naked eye, like hyaline cartilage. Disseminated foci of calcification of pinhead size gave the cut section a slightly rough surface. Microscopically the tumors were found to be made up mainly of round and spindle-shaped sarcoma cells. The islets which appeared cartilaginous were made up of larger and smaller round encapsulated cells lying in a hyaline and in a fibrous intercellular substance. In the first of the three specimens the invasion of the Haversian canals of the tibia by sarcoma cells could be plainly traced.

NEW YORK ACADEMY OF MEDICINE.

Meeting of the Section on Surgery, held January 14.

The Field of Ethyl Chlorid Narcosis.

DR. MARTIN WARE, in a paper on this subject said he had been able to collect records of 11,207 cases in which this form of narcosis had been employed. He had personally tested it in 200 cases of minor surgery, using as an inhaler the ordinary mouth-piece of the nitrous oxid gas apparatus, with the gas tube tightly plugged with cotton. The ethyl chlorid used was that known as the monochlorid, and it was best and most economically administered by an imitation of the drop method, i. e., spraying it intermittently on the gauze. Anesthesia usually occurs abruptly after one or two minutes, and except in neurotics and alcoholics, without struggling or excitement. In children, particularly a fair degree of relaxation was secured, which was more than could be said for adults anesthetized in this manner. From five to six grams were ordinarily required to produce anesthesia. Ethyl chlorid, when thus given, is cheaper than its chief competitor, nitrous oxid, and has the advantage of requiring no bulky apparatus.

DR. WILLY MEYER said that for the past two years he had been using ethyl chlorid in connection with the Schleich mixture of chloroform and ether, and had been much pleased with the results.

DR. JAMES P. TUTTLE said that he had used ethyl chlorid as a preliminary to ether anesthesia in about 250 cases, and with such happy results that he believed this would be in the future its chief field of usefulness.

Meeting of the Section of Medicine, held January 15.

The Mosquito-Malaria Theory.

DR. W. N. BERKELEY read a paper entitled "Some Further Work on the Mosquito-Malaria Theory, with Remarks on the Conditions Around New York." Out of a large number of malarial patients examined during the summer, he had found only one who had apparently developed the malaria on Manhattan Island. As to the period of incubation between the bite and the chill, one case was presented in evidence, that of an intelligent woman living in East Seventieth street. She had not been away from New York City, but had spent one night with a sister at Fordham, and had there been bitten by mosquitoes. Just fourteen days later she had had her first chill, and her blood had been found swarming with the tertian malarial parasite. Inquiry showed that a number of members of this sister's family had suffered from malaria and had been relieved by taking Warburg's tincture. Last summer several cases of typical tertian malaria had developed in a town near New York City. Inquiry showed that they had been grouped around a pond, and that there were a number of segregated pools and post-holes at the edge of this pond. It had been suggested that, as far as possible, all anopheles found in that vicinity be destroyed systematically, and the smaller breeding-places be filled in. In addition screens were provided for the houses. It was recommended that the malarial patients should be secluded, and protected from the bites of mosquitoes as long as the malarial parasites remained in the blood. These suggestions had been carried out, with a most satisfactory result, not a single new case developing in that locality. The speaker was of the opinion that the board of health of Greater New York should require malarial cases to be reported like scarlet fever and diphtheria. An inspector should be sent to every infected house to instruct the people to kill the mosquitoes therein, provide screens for the windows and doors, protect the patients with netting and fill in neighboring pools of water, or else have them heavily petrolized. He was doubtful whether anopheles could be completely exterminated in this city because of the tearing up of the streets and the many sunken blocks, yet he was positive that much could be accomplished in this direction.

Treatment of Influenza.

DR. WILLIAM H. THOMSON read a paper on this subject. He attributed the mild type of the present epidemic of la grippe to the fact that most of the people had previously had this disease, and had probably in this way acquired a certain degree of immunity. He had had the greatest success in its treatment by the following combination: 1/6 grain of the solid extract of aconite, 1 grain of Dover's powder, 8 grains of phenacetin and 6 grains of quinin. This is to be made into two pills, and 6 are to be taken daily so long as there is fever, and then the dose reduced to three a day until all catarrhal symptoms have disappeared. The obstinate paroxysmal cough so commonly observed after an attack of la grippe he had found to yield to a dose of 10 grains of antipyrin and 20 grains of bromid, and also to be greatly benefited by irrigation of the nose and throat with one quart of hot water in which has been dissolved 2 drams of chlorate of potash and 5 drops of the oil of peppermint. Perhaps one of the most important things to remember is that as soon as attacked with la grippe a person should take to bed and remain there until further orders from his physician.

DR. ANDREW H. SMITH said that in a few instances he had been able, with the laryngoscope, to obtain a view of the bifurcation of the trachea in persons afflicted with the distressing cough that follows an attack of la grippe. He had found a velvety condition of the mucous membrane at this point. In

efforts to relieve this cough his chief reliance had been on the internal administration of malto-yerbin. The physician should instruct his patients regarding the necessity of respecting the languor which they feel.

DR. JAMES K. CROOK suggested that persons who were susceptible to bronchial affections should, whenever practicable, leave a region infected with influenza, and that where this could be done, as well as in those predisposed to infection with la grippe by reason of the exposure incident to their occupation, they should take small doses of whisky and quinin daily. For the first acute symptoms he makes use of 5 grains of phenacetin and 20 grains of bromid of sodium, at intervals of five hours. The severe muscular pains seemed to be best relieved by an occasional Turkish bath.

DR. MORRIS MANGES said that in la grippe cases he had almost invariably found, on auscultation, fine dry râles over the base of the lung posteriorly. A warm moist compress around the chest made these patients very comfortable. To avoid re-infection the patient should not remain too long in one room.

DR. BRANDRETH SYMONDS said that in the early and severe epidemics of influenza the life-insurance examiners had been surprised to find that in as many as one in every ten persons, apparently healthy, and applying for life insurance, albuminuria was present. For the most part, this was transitory.

DR. A. ROSE spoke highly of the beneficial effects of the carbonic acid bath and the nasal douche of this gas in cases of la grippe.

Stated Meeting held January 17.

The Value of the X-Ray in Medicine and Surgery.

DR. FRANCIS H. WILLIAMS, of Boston, considered the x-ray in medicine, illustrating his remarks. He said that he uses in his x-ray work, a static machine having eight plates, each six feet in diameter, and with an adjustment by means of which the intensity of the light could be varied in order to bring out certain minute details that might otherwise wholly escape the observer. The patient is seated in a chair or placed on a stretcher, and the light placed about three feet from the fluorescent screen. Special care is taken that the source of light shall in every case be at a point corresponding to the intersection of a line joining the nipples and the median line of the body. In cases of emphysema the thorax appears lighter than normal, and the heart changes its position but slightly. In early tuberculosis the excursions of the diaphragm are shortened on the affected side, the heart drawn over a little to that side and there is a distinct increase in density. Not infrequently, as for example in cases of central pneumonia, consolidation of the lung is very evident on an x-ray examination, though it can not be detected by percussion and auscultation. An x-ray examination is very useful in cases of suspected aneurysm or new growths in the chest. Out of thousands of examinations he had not met with a single case of x-ray dermatitis.

DR. ROBERT ABBE discussed the subject from the standpoint of the surgeon. In his experience x-ray examinations had proved most helpful in connection with fractures of the shoulder and injuries about the elbow. It had been the means of adding to our knowledge many new varieties of Colles' fracture, and enabled the surgeon to do far better work in this class of injuries. At the present time it is not a difficult matter to secure a good radiograph of fractures of the cervical vertebræ. He had found the method disappointing as a guide to bullets situated deeply in the tissues, owing to the difficulty of ascertaining the exact plane in which the bullet lies. It was very helpful, however, in the removal of needles.

DR. CHARLES L. LEONARD, Philadelphia, discussed "The Value of the x-ray in the Detection and Exclusion of Renal and Ureteral Calculi." In four of the patients he had examined there had been calculi in both ureters. Even the most minute calculi are capable of detection by this method, as was abundantly proved by the radiographs exhibited. The reading of the negative was, however, often the most difficult part of the diagnosis. The possibility of ascertaining the exact size and position of a calculus made it possible to estimate the chances of calculi being discharged spontaneously, and sometimes warranted the postponement of operative intervention. In 136 cases in which he had used the x-ray, renal calculi had been found in 17 and ureteral calculi in 19 cases.

MR. E. W. CALDWELL discussed "the Technique and Correct Interpretation of Radiographs." He said that the static machines are well adapted for fluoroscopic work and give a steady excitation of the tube, but if of sufficient power they are cumbersome and not very reliable. The most generally useful source for the x-ray is an induction coil capable of giving a ten-inch spark, provided with what is known as a fluid interruptor. At the patient's house, if a direct current electric lighting circuit is available, he makes use of this form of apparatus, but if there is no such circuit he passes a lamp-cord out of the window and connects it with the battery of an electric cab standing in the street. In making a radiograph of the thorax the chest should be strapped and the patient directed to employ abdominal breathing as much as possible. Similarly, in taking a radiograph of the abdomen, the latter should be bandaged and the patient told to breathe chiefly with the chest.

DR. WALTER B. JAMES said that from a somewhat limited experience with the method in internal medicine, he felt that many general practitioners might very profitably make use of this new method of precision.

DR. CARL BECK showed some skiagraphs of biliary calculi in the living subject—the first of the kind ever made. A "hard" tube and a coil giving a 15-inch spark should be employed for such work.

Current Medical Literature.

Titles marked with an asterisk (*) are noted below.

New York Medical Journal, January 19.

1 *A Peculiar Case of Migratory Foreign Body, With X-Ray Illustrations. D. Braden Kyle.
2 Two Cases of Hemarthrosis of the Knees. Russell A. Hibbs
3 Report of Two Cases of Dermoid Cyst of the Nose. H. S. Birkett.
4 *The Method of Examination of Infants. C. Herrman.
5 A Case of Paroxysmal Hemoglobinuria. William J. Lamson
6 *General Anesthesia: The Preliminary and After-Treatment, With Remarks on Chloroform and Ether. E. Payne-Palmer.
7 Gastric Ulcer: Report of Two Cases. E. S. Goodhue.

Philadelphia Medical Journal, January 19.

8 An Abstract of the Report Upon the Epidemic of Pest in Japan from November, 1899, to January, 1900. S. Kitasato, T. Takaki, K. Shigo, and G. Moriya.
9 *On Perforation and Perforative Peritonitis in Typhoid Fever. William Osler.
10 *Hemoglobinuria Complicating Typhoid Fever. John H. Musser and Aloysius O. J. Kelly.
11 *The Clinical Use of Thermol in Typhoid Fever at the Atlantic City Hospital, Atlantic City, N. J. A. B. Shimer.
12 Two Cases of Localized Neuritis Occurring as a Complication of Typhoid Fever. H. J. White.
13 *The Phenomena of Atropin Poisoning Following the Cessation of the Respiratory Movements. Edward T. Reichert.
14 Report of a Case of Cholelithiasis With Formation and Rupture of an Abscess of the Abdominal Wall. J. H. Gibbon.
15 A Case of Mirror-writing and of Diffuse Hypertrophy of Both Breasts in an Epileptic Negress. W. G. List.

Medical Record (N. Y.), January 19.

16 *The Mosquito Theory of the Transmission of Yellow Fever, With Its New Developments. Charles Finlay.
17 *Notes on Ovarian Grafting. Robert T. Morris.
18 Case of Thrombophlebitis of the Left Sigmoid Sinus Masking a Latent Brain Abscess in the Left Temporo-Sphenoidal Lobe, Both Arising from Chronic Otitis Media. Carl Koller.
19 *Subarachnoid Cocainization in Obstetrics and Gynecology: a Report of Twenty-one Cases. N. J. Hawley and F. J. Taussig.
20 *Important Points in the Management and Treatment of Consumption. Charles R. Upson.

Medical News (N. Y.), January 19.

21 *Conclusions Formed After Six Years' Experience With the Antitoxin Treatment of Diphtheria. Henry F. Koester.
22 *Problems in the Etiology, Diagnosis and Treatment of Tuberculous Disease of the Upper Air-Passages. Jonathan Wright.
23 Notes on the Interesting Cases of a Month's Dispensary Practice. William L. Stowell.
24 A Case of Adiposis Dolorosa. Ellice M. Alger.

25 Ligation of the Internal Jugular Vein Followed by Thrombosis of the Lateral and Sigmoid Sinuses. Charles G. Levison.

Boston Medical and Surgical Journal, January 17.

26 Dedication of the New Building of the Boston Medical Library. Addresses by David W. Cheever, James R. Chadwick, F. W. Draper, Remarks by William Osler, J. S. Billings, H. C. Wood, Henry P. Walcott, and Letter by S. Weir Mitchell.

27 *Note on the Treatment of Epidermoid Cancer by the Roentgen Rays. Francis H. Williams.

Cincinnati Lancet-Clinic, January 19.

28 Influenza or La Grippe. Charles F. Hope.
29 "Was Death Due to Chloroform?" J. F. Baldwin.
30 An Improved Rectal Speculum. L. J. Krouse.

St. Louis Medical Review, January 19.

31 *"Appendicitis"—Is Its Diagnosis Always Easy? Is Its Treatment Settled Beyond Question? J. L. Wiggins.
32 Tuberculous Disease of Some Joints and a Résumé of Its Surgical Treatment. Louis J. Hirschman.

Medical Fortnightly (St. Louis), January 10.

33 Observations Based on the Probable Mode of Formation of Urinary Stone to Its Recurrence and Prevention. Reginald Harrison.
34 Anatomy of the Eye. James E. Free.
35 Diseases of the Lung and Pleura. (Continued.) Albert Abrams.
36 General Peritonitis. Carl E. Black.
37 Some Suggestions on the Treatment of Infected Wounds and Ulcers. Erasmus McGinnis.

Medical Age (Detroit, Mich.), January 10.

38 Gangrene. W. A. Hackett.
39 *Subacute and Chronic Seminal Vesiculitis. Jos. E. Morrow.
40 *The Physiological Test—Talks with Medical Men. T. Mabem.

Pediatrics (N. Y.), January 1.

41 *On the Causation of the Congenital Stridor of Infants. John Thomson and A. Logan Turner.
42 *A Study of the Plantar Reflex in Infancy. John Lovett Morse.

The Canadian Practitioner and Review (Toronto), January.

43 The Treatment of Tuberculosis in Sanatoria. P. H. Bryce.
44 The Preventive and Curative Treatment of Pulmonary Tuberculosis. Geo. H. Hodge.
45 Screw Nails in Fractures. A. Groves.

Archives of Otology (New Rochelle, N. Y.), December, 1900.

46 *Shall the Antrum Be Opened in All Acute Empyemas of Mastoid Cells? E. F. Snydacker.
47 *Contributions to the Normal and Pathologic Histology of the Pharyngeal Tonsil. Friedrich Wex.
48 *Aural Complications of Scarlet Fever. With Twelve Post-mortem Observations. Bernhard von Gaessler.
49 An Analysis of Rinne's Experiment. Prof. Bezold.
50 A Clinical and Histological Contribution to the Sarcomatous Tumors of the Temporal Bone. F. J. Hegener.
51 Report of Three Cases of Ligation of the Internal Jugular for Septic Thrombosis, Following Purulent Otitis Media—Recovery. Edward Bradford Dench.
52 Report on the Progress in Otology for the Second Quarter of the Year 1900. A. Hartmann.

Journal of Comparative Neurology (Granville, Ohio), December, 1900.

53 The Giant Ganglion Cells of Catostomus and Coregonus. J. B. Johnston.
54 Arrangement and Terminations of Nerves in the Esophagus of Mammalia. Lydia M. DeWitt.
55 The Vibrissæ of Certain Mammals. J. Franklin Messenger.
56 The Ophthalmic and Eye Muscle Nerves of the Cat Fish (Ameiurus). I. S. Workman.
57 On the Homologies of the Chorda Tympani in Selachians. H. A. Green.

Cleveland Journal of Medicine, January.

58 *The History of Typhoid Fever. H. D. Haskins.
59 *The Etiology of Typhoid Fever. W. T. Howard, Jr.
60 *The Diagnosis of Typhoid Fever. Charles F. Hoover.
61 *Prognosis in Typhoid. H. W. Rogers.
62 *Management of Typhoid Fever. H. J. Lee.
63 *Feeding in Typhoid Fever. Edward P. Carter.
64 *Sequels of Typhoid Fever. O. T. Maynard.
65 A Case of Uterus Bilocularis or Uterus Septus. F. E. Bunts.
66 Polypoid Tumor of the Rectum. J. T. Smith.

Peoria Medical Journal, January.

67 Notes from a Berlin Clinic on Diseases of the Stomach. Roy Sexton.
68 Ether or Chloroform: Which? William R. Allison.

Medical Council (Philadelphia), January.

69 Disorders of the Sexual Functions in Man. A. H. P. Leuf.
70 *Some Phases in the Treatment of So-called Uric Acid Lesions. Alfred C. Croftan.
71 The Female Bladder. A. L. Russell.
72 An Interesting Case of Diphtheria. Eugene P. Bernardy.
73 Gonorrhea and Marriage. (Concluded.) C. C. Mapes.
74 Sarcoma of the Neck: Successful Operation. William L. Rodman.
75 Preliminary and Minor Railway Surgery. J. M. Salmon.
76 Association Neuroses. J. F. Ritter.
77 Climate in Medicine. John Stolze.
78 Sulphur. W. O. Bunnell.
79 The Injection Method for the Relief and Cure of Hernia. (To be continued.) C. Fletcher Souder.
80 Low Temperature of 93.4 Following Miscarriage Incident to Typhoid Fever. G. L. Woods.

Occidental Medical Times (San Francisco), January.

81 Some of the Accidents from the Use of the Obstetric Forceps. Henry Gibbons, Jr.
82 Anemia in Its Relation to Surgery. H. Kugeler.
83 Plague in San Francisco. W. H. Kellogg.
84 Asphyxia Neonatorum. Wm. Himmelsbach.
85 Gunshot Wounds of the Skull. T. C. McCleare.
86 Extrauterine Pregnancy. A. H. Pratt.

Chicago Clinic, December, 1900.

87 Pharmacology of Alkaline Medication. J. A. Patton.
88 *Personal Observations and Comments on Bad-Nauheim and the Schott Treatment. C. Turner.
89 Intubation and Tracheotomy. Aime Paul Heinecke.
90 Does Thialion Take the Place of Calomel. R. A. Meath.

Medical Summary (Philadelphia), January.

91 Nasal Hygiene. Edwin W. Pyle.
92 Sexual Perversions. (To be continued.) Drs. Pennebaker and Tripp.
93 The Treatment of Sick Headache. David L. Saunders.
94 Hematuria. Geo. J. Monroe.
95 Gunshot Wound of the Pericardium. Drs. Dwight and Cobb.
96 Tonsillitis. (Continued.) A. Sandner.
97 Hematuria As It Is—Reply. Ben. H. Brodnax.
98 Gonorrhea. S. A. Buchanan.
99 Beginning Muscular Atrophy, Following Strain. Burton W. Swayze.
100 Catarrhal Pneumonia. E. N. Ritter.

Denver Medical Times, January.

101 Foreign Bodies in the Esophagus. George W. King.
102 *Practical Points on the Feeding of the Sick. E. A. Irwin.
103 *Mastoiditis. When Does the Disease Begin and When Shall We Operate? T. D. Tuttle.
104 Double Operation for Undescended Testicles. B. C. Brooke.
105 *Malpractice Suits and the X-Ray. Rudolph Horsky.

American Medical Compend (Toledo, Ohio), January.

106 The Early Diagnosis of Gastric Cancer with a View to Its Radical Cure. G. W. McCaskey.
107 Diabetes Mellitus. C. Storz.

Louisville Monthly Journal of Medicine and Surgery, January.

108 *Some More Fallacies in the Practice of Diseases of the Rectum. Jos. M. Matthews.
109 Menorrhagia. H. A. Davidson.
110 *Neurasthenia: A Clinical Lecture. Curran Pope.
111 Medical Observations Abroad. (Continued.) August Schachner.
112 Treatment of Lithemia. Frank M. Floyd.

Canada Lancet (Toronto), January.

113 An Historical Sketch of Canadian Medical Education. (To be concluded.) Walter B. Geikie.
114 A Case of Tubercular Meningitis with Recovery. P. L. Scott and J. T. Fotheringham.
115 A Case of Asthma Associated with Prolapse of Liver. H. B. Anderson.

Indiana Medical Journal (Indianapolis), January.

116 *On the Importance of Pathological and Bacteriological Laboratories in Connection with Hospitals for the Insane. Lewellys F. Barker.
117 *What Is "Constitution" as Applied to Medical Practice? Guido Bell.
118 Tracheotomy for a Foreign Body in the Larynx. J. C. Sexton.
119 *Hyperpyrexia—Report of a Case in Which the Temperature Reached 113 F. J. C. Alexander.

Hot Springs Medical Journal, January.

120 *What Is Normal Menstruation. Geo. J. Engelmann.
121 *An Operation for the Treatment of Marked Rectal Prolapse in Women. J. Wesley Bovée.

Kansas City Medical Index-Lancet, January.

122 *The Value of the Hot Decinormal Salt Solution as a Therapeutic Agent.
123 Medicine an Inexact but Progressive Science. Fred S. Clinton.
124 Some Remarks on Lobar Pneumonia. Robert T. Sloan.
125 Cerebral Hemorrhage (Apoplexy). John Punton.

Memphis Medical Monthly, January.

126 Water. C. Travis Drennen.
127 Ectopic Gestation, with Report of Cases. J. P. Runyan.
128 The Management of Crossed Eyes in Children. E. C. Ellett.
129 "Dr. Jekyll and Mr. Hyde" (Insanity, etc. Cases of). N. F. Raines.

130 Pylorectomy for Malignant Obstruction. Hysterectomy for Primary Cancer of Cervix Uteri in a Nulliparous Woman. William W. Taylor.
131 A Further Note on the Rôle of Purulent Rhinitis of Childhood in the Production of Atrophic Rhinitis. Richmond McKinney.

Texas Medical News (Austin), December, 1900.

132 Chemical Methods as Applied to the Diagnosis and Therapy of Stomach Diseases. Seth M. Morris.
133 The Physician in His Relation to the Public and to His Professional Brethren. S. Burg.
134 Vesical Calculus, Report of an Interesting Case—Perineal Lithotomy, Recovery. H. A. Barr.
135 Feeding of Infants. J. Farrar Haley.
136 Remarks upon the Treatment of Acutely Inflamed Guts. R. E. B. Bledsoe.

AMERICAN.

1. **Migratory Foreign Body.**—Kyle reports a case of attacks of frightful neuralgic pain occurring at intervals at different sites, at one time, suggesting mastoiditis, again facial neuralgia, again ethmoiditis, etc. Between attacks there was absence of any symptoms enabling one to locate the disease. The X-ray used to locate the foreign body produced acute dermatitis twenty-four hours later, with falling of the hair, the bad results of which were, however, temporary. While attempts at location were unsatisfactory, it was believed that there was a needle or piece of metal under the skin and this was vainly searched for with a magnet. An opening was made in the antrum, unsuccessfully, but was followed by swelling, apparently like a boil; this finally opened and the needle was extracted. The way the foreign body entered the tissues is unknown. Kyle knows of no such case in the literature with the peculiar features here presented.

4. **Examination of Infants.**—Two things should be borne in mind, says Herrman, in making examinations: 1. What is normal to the infant as against older children and adults? 2. Are there any abnormalities in this particular case under examination not due to the present illness? If such exist they may be either congenital or resulting from previous disease, and as illustration he mentions a yellow spot on the throat which was congenital though taken for a diphtheritic patch. The various points noted are physical characteristics, growth, size, temperature which is much greater than in the adult, and percussion and auscultation of the chest, the special points of which can not be given here, as they are noted in too much detail. The pulse, examination of abdomen, spinal column, mouth and throat should always be looked after. The stomach, genitals, ear, urine, feces, etc., are also noticed.

6. **Anesthesia.**—Palmer summarizes the indications for chloroform as follows: 1. In extensive bronchitis, bronchorrhea, pneumonia, or any extensive inflammatory condition of the pulmonary tract, because of its causing less irritation of the mucous membrane and less mucus to be secreted. 2. In acute and chronic nephritis, because it is less irritating to the kidneys. 3. In aneurysm, atheroma, endocarditis, and high-tension pulse, because it causes a perceptible fall in the blood-pressure. 4. In operations on the brain, because it causes cerebral anemia, while ether causes congestion and venous oozing. 5. In operations in the abdominal and pelvic cavities, because it causes a more complete relaxation of the abdominal muscles. 6. In those addicted to the use of alcohol and narcotics, because they usually take ether badly. In the hands of the inexperienced it is most dangerous on account of its depressing effects on the heart and lowering of the blood-pressure. Its dangers are immediate as opposed to those of ether, which are mostly in its sequelæ. The signs of danger are relaxation of the pupils, pallor of the face, sudden and rapid failure of the pulse and the respiration becomes feeble and intermittent. If any of these appear, the mask should be removed at once, and if they reappear when chloroform is again administered, ether should be substituted. Chloroform should always be given with the patient in the recumbent posture, which should be retained during the entire operation. Ether can be given in the sitting posture when necessary. It is indicated: In empyema with dilatation of the right side of the heart, fatty degeneration of the heart muscles and dilatation of the heart without compensatory hypertrophy; in extreme prostration and anemia; in shock, collapse and hemorrhage. When given under the latter conditions, heat should be applied to keep up the body temperature, as under narcosis there is a fall of from one-third to 1 degree. Very stout subjects should be given ether, as fatty infiltration of the heart has been found after prolonged chloroform anesthesia. One great advantage is that it can be given by the unskilled anesthetizer with greater safety and at the same time allow anesthesia to be more profound. Respiration is to be watched closely, as it kills by paralysis of the respiratory center. Collapse rarely occurs without warning. The symptoms are shallow, gasping respiration, small, rapid and irregular pulse, dilated pupils. If it causes persistent cough, with excessive amount of mucus or undue vomiting we should substitute chloroform. Precautions should be used with ether in operating at night by artificial light, as its vapor is inflammable. He also cautions particularly in regard to the need of admitting air, and in not giving the anesthetic in too concentrated form, also against beginning the operation when anesthesia is incomplete. When complete the pupils should be moderately contracted and remain so, respiration deep and regular, and the pulse slow, though it may be rapid without danger unless it becomes weak and irregular. There should be a general muscular relaxation. The dilated immovable pupil indicates danger, and sudden wide dilatation of pupils calls for immediate measures. When vomiting seems to be inevitable we should remove the inhaler, lower the head and turn it to one side, and draw the jaw forward by pressing behind the angles. As soon as the patient is quiet we should cleanse the mouth and pharynx and then administer the anesthetic. Directions for resuscitation and stimulation are given also the after-treatment. The patient should be continually watched until consciousness has been regained. If recovery does not occur within sufficient time, hot-water baths are indicated, and stimulants, and if much loss of blood has occurred normal saline solution should be infused. It is good practice to give a hot colon injection of about one quart of warm normal saline solution after prolonged operations. It lessens the thirst and shock, stimulates the kidneys and brings the patient out earlier and more satisfactorily. Vomiting should be treated by inhalation of fumes of vinegar as long as necessary. For the first twelve hours nothing should be allowed to enter the stomach.

9. **Perforation in Typhoid.**—Among the complications of typhoid, perforation is the most formidable, and Osler expresses the opinion that it is remarkable that it does not occur more frequently when we consider the extent and character of necrotic processes. The all-important question is to recognize its occurrence and, if possible, operate before widespread general peritonitis is produced. He reports several cases in which the accident occurred and where operation was performed, in one of which, however, it was incomplete, while in the other two it was a success. He gives a schedule of specific instructions to be followed in cases of typhoid fever in which perforation is suspected. He thinks if the attending physician would notice all these points much may be done to reduce the mortality. He gives detailed instructions concerning these cases, and the necessity of watching for the first feature of perforation is emphasized.

10. **Hemoglobinuria in Typhoid.**—In the cases reported by Kelly and Musser there was hemoglobinuria observed from the beginning and lasting for seven days. The progress of the disease was favorable. Aside from the rarity of the complication, other facts noticed are absence of malaria as an etiologic factor, and the use of cold-water baths with good results when it is known that cold is certainly the provoking agent of some cases of hemoglobinuria, especially the paroxysmal type. The authors think there can not be much doubt that the symptom was an unusual manifestation of typhoid infection; the case was not severe unless these symptoms should be considered in that connection. It is not unreasonable to assume that the patient had a peculiar idiosyncrasy, making his hemoglobin and red corpuscles especially susceptible to the action of typhoid toxins.

11. **Thermol.**—Shimer has experimented with thermol ($C_{14}H_{13}NO_3$) and reports cases with temperature curves showing its effect. He remarks that in each of these typhoid cases the temperature curve was markedly dissimilar to typical typhoid temperature, and the specific action of thermol on the fever is, he thinks, evident, from his observations in hospital cases as well as in private practice. He believes the earlier thermol is administered the better the result. As an antipyretic it is harmless and can be given at any time or under any conditions, any harmful effects such as collapse never being noted. The mode of administration is .5 gram at intervals of every two or three hours and to be given when the fever commences to rise, and continued even after it has disappeared, in smaller doses and at longer intervals.

13. **Atropin Poisoning.**—This experimental investigation of Reichert's gives the different stages of atropin poisoning, particularly as observed in the effects on the respiratory and vasomotor centers. The whole shows the extraordinary power of recovery of the system from the action of atropin. In one experiment recorded, 1.5 grams of atropin, or over six times the minimum fatal dose, was given in divided doses. Two hours after the first injection feeble respiratory movement occurred, there was a return of reflexes, the pulse-rate was higher than immediately after the first injection and arterial pressure had increased about four-fold. Fifteen minutes later respiratory movements were sufficiently frequent and deep to dispense with artificial respiration. In the second experiment over seven times the minimum fatal dose was given and the same strong general tendencies were manifest. Among other actions, the effects of large doses on the motor and sensory nerves are positive, both being completely paralyzed during the second period. A curious fact shown by these experiments was that while the motor fibers are absolutely inexcitable to faradic stimulus, they retain their conductivity. These experiments have an important bearing on the treatment of poisoning in man, as they show that death is due to paralysis of the respiratory center, that the center has great recuperative power, and that if artificial respiration be properly practiced the respiratory center recovers its activity, which is accompanied by general and marked improvement of the other depressed states. In man it seems that atropin poisoning should be readily treated with artificial respiration, persistently and intelligently practiced, as by Laborde's method, accompanied by such other treatment as the indications suggest.

16. **Mosquito Theory of Yellow Fever.**—Finlay reproduces a portion of an article, dated Dec. 31, 1891, which has never been published in full, though portions of it were sent to the congress at Chicago in 1892. He believes that the recent experience of the army yellow fever board has placed beyond the question of a doubt the fact that the culex mosquito, fasciatus, does transmit yellow fever to non-immune persons so well isolated from other sources that the infection could be considered a certain result of inoculation. He also thinks it noteworthy that these bear out one of his former statements, that, whereas one or two stings from a mosquito recently contaminated may cause a mild attack of the disease or simply confer immunity without any perceptible pathogenic manifestations, the severer attacks result from a greater number of such stings, and the same might follow a single sting from a mosquito exclusively fed, during several days or weeks after its contamination, on sugar or sweet juices. Another important point which the army board has noticed and has undertaken to demonstrate, experimentally, is the fact that the other sources to which the yellow fever has been hitherto attributed are absolutely incapable of determining the attack of the disease.

17. **Ovarian Grafting.**—Morris reviews the subject of ovarian grafting in detail. Cases are given, two of which have been previously reported, and in one of the cases, after transplanting a portion of the patient's ovary and excision of the remainder, the patient became pregnant, but lost the child by aborting in the third month, presumably because of the presence of persistent pelvic adhesions. In several other cases the ovaries were transplanted from one patient to another and menstruation re-established. In his earlier experiences the ovary was sometimes grafted into a slit in the fundus so that the uncut surface projected into the lumen of the uterus. In his later cases he has chosen the broad ligament as a site for grafting, as nearly as possible at the point that the ovary would normally occupy. The best result of ovarian grafting, in his experiments to date, is the avoidance of the menopause. Several successful pregnancies have been observed in rabbits by other experimenters, but we have yet to see a similar result in women as a result of the operation. The paper concludes with a review of the experiments of other investigators. The dangers from ovarian grafting seem to be no more than those from simple uncomplicated laparotomy.

19. **Spinal Cocainization.**—Twenty-one cases of subarachnoidean cocainization in obstetric and gynecologic cases are reported by Hawley and Taussig. The results tend to support the view that the method is not very dangerous, except perhaps to the child *in utero*. In 5 of the 21 cases the cocainization seemed to have a toxic action on the child. The pulse that was 140 would drop to 90 or 100 after the injection and, remaining so for about ten minutes, would begin to return to normal. Three times the child was somewhat asphyxiated when born. One child died, but death was not attributed to this, as it showed signs of weakness previous to the injection. In no case was there any post-partum hemorrhage. When it produces disagreeable symptoms they are usually transient. In labor cases it usually retards the progress. From a study of the cases the use of lumbar puncture in multiparæ would seem to be less called for than inhalations of chloroform. The results obtained from its use in primiparæ were not very encouraging. In instrumental deliveries, when urgency is required and the patient not of a very nervous temperament, the spinal narcosis seems to meet every indication. The delivery would then be much facilitated by the patient's aid, which would be impossible under general anesthesia, and the dangers of retained placenta and postpartum hemorrhages are lessened. The authors conclude that it is doubtful whether puncture will ever replace general narcosis in abdominal operations. In vaginal celiotomy and minor gynecologic work it seems to have its greatest field of usefulness.

20. **Pulmonary Tuberculosis.**—Upson thinks that the need of greater personal attention to consumptive cases is manifest, and if the general practitioner could give the same care to these that he does to his cases of pneumonia the mortality would be lessened. He lays little stress on heredity, and believes that when several members of a family contract the disease it can usually be traced to infection. Twenty-five years' experience has convinced him of the curability of many cases. If the disease is a localized one, or even in both lungs, and the digestion and assimilation are or can be made good, sleep is restful, the environments healthful, and the patient is possessed of a determination to get well, a favorable prognosis can be made. Examinations should be extremely careful and thorough if success in the treatment is to be expected. The special points in the treatment are noticed, the use of light, ventilation, disinfectants, care of the sputa, cleansing of the intestinal tract in the beginning, tonics, systematic exercise, cold sponging and attention to hygienic environments generally. The author is inclined to look favorably on intrapulmonary medication, the frequent use of a mixture of eucalyptol, pine-needle oil, menthol and formic aldehyde having proved in his hands the most beneficial of the remedies he has tried.

21. **Diphtheria Antitoxin.**—To obtain the best results from antitoxin Koester says it must be used fearlessly and in effective quantity, which is never less than 2000 units, and in severe cases at least 3000 must be used, and this dose repeated in from twelve to twenty-four hours. Antitoxin in itself never does any harm and a supply with an appropriate syringe should be a part of every physician's armamentarium whenever he goes to see a patient of whose condition he knows nothing. The dose is to be regulated by the severity of the disease and its duration. There are also other features to be considered and, in cases of diphtheritic croup, very large doses should be given, 4500 to 6000 units, and we should be ready to intubate

at a moment's notice. Another advantage is its immunizing action, thus enabling us to prevent the disease spreading. The accessory treatment is noticed and the effect of complications. The author believes that rash following the use of antitoxin is due to excrementitious salts in the cells of the horse's serum, and if they were eliminated its occurrence would be prevented. He says: 1. Antitoxin is a positive cure for diphtheria, when employed in sufficient quantity and sufficiently early in the disease. 2. Even when employed too late in the disease to produce its specific action, it can not under any circumstances be productive of harm. 3. When used before the invasion of diphtheria, antitoxin possesses a positive immunizing power which lasts about thirty days.

22.—See abstract in THE JOURNAL, XXXV, p. 1171.

27. **The X-Ray in Cancer.**—Williams states his conviction that the X-rays are of value in the treatment of certain forms of epidermal cancer. His experience indicates that we have either in the X-rays themselves, or in some other form of radiation from the Crooke's tube, a valuable therapeutic agent in epithelioma, the beneficial action of which may be brought about without causing a burn. The earlier the treatment is undertaken the better. It is not improbable that we may find its curative action limited to superficial growths, though as a means of relieving the painful features of disease in other forms it may be of some use. In cases where it is effective the odors disappear, discharge decreases and the growth steadily diminishes in size.

31. **Appendicitis.**—The conclusions with which Wiggins ends his article, and which he claims are incontrovertible, from surgical experience, are: 1. There is a period during the attack when, if properly investigated, most cases can be diagnosed. 2. In some cases the real condition may be so masked by intercurrent troubles as to require an explorative incision for its solution. 3. Some cases may be simple and some severe, but no one can state in any given case, no matter how simple to-day, what the conditions will be to-morrow. 4. There is a period in every attack when the appendix can be removed with perfect safety; and there may occur a time in any attack when life is jeopardized either with or without its removal. 5. The same judgment we exercise in ordinary business affairs, if applied to a diseased appendix, would suggest its removal at the earliest moment compatible with proper preparation.

39. **Vesiculitis.**—The anatomy of the seminal vesicles is described by Morrow and the pathology of their inflammation discussed. He recognizes three classes of this disease: 1. Those caused by sexual excesses or other sexual irritability. 2. The gonorrheal type. 3. The tuberculous, which may be combined with the gonorrheal. The development of this disease, unless it takes on the acute type, is insidious, but the suspicious symptoms are frequency of urination, feeling of fullness and stiffness of the parts, perineal pain, sacral pain, various disturbances of the sexual functions, bacteria in the urine, other sources having been excluded, etc. The diagnosis must be by exclusion of stricture, posterior urethritis, prostatitis, spermatorrhea, cystitis, and pyelitis, but the only really effective means is digital examination per rectum by the educated finger. The tuberculous type can not always be excluded, but the evidence of tuberculosis elsewhere will clear up the case. The prognosis is usually good if the patient is of middle age or good physique. In older persons and in tuberculous cases the prognosis is not favorable. The only treatment of simple and chronic vesiculitis is stripping the vesicles, the method of which is detailed. He advises against the use of too much force and the employment of special care in chronic cases to avoid hemorrhage. In most instances no other than this method is required. Occasionally it may be necessary to give potassium bromid as a sedative or tonic. The treatment may cover from six weeks to six months. The stripping should not be undertaken too soon after an attack, nor continued if it increases the tenderness. In the tubercular type it is almost invariably contraindicated and we should use only tonics and antitubercular remedies.

40. **Strophanthus.**—Mabem has taken the testimony of various physicians in regard to the action of strophanthus, and found a great variation of opinion, some finding it useless, others considering it an indispensable drug. In this connection he calls attention to the importance of physiologically testing drugs before their use. The failure to do so may incur serious disappointment and loss of faith in the remedy.

41.—See abstract in THE JOURNAL, XXXV, p. 1663.

42. **Infantile Plantar Reflex.**—Morse's article is a study of the statements of others who have observed this reflex in children, and apparently, also, his own observations. His conclusions are: "It is evident, therefore, that there is no constant plantar reflex during the first year, and that while the reflex approaches the adult reflex during the second year, it is still inconstant. It is also evident that since there is no constant reflex under normal conditions during the first two years, no conclusions can be drawn from the presence, absence or character of the reflex in the diagnosis of abnormal conditions of the nervous system at this age. Further observations are necessary to show at what age the normal reflex is established. It is undoubtedly later than the second year."

46. **Acute Aural Empyema.**—The question whether the antrum should be opened in acute empyema is considered by Snydacker, who reviews the various authorities. Operators in such conditions may be divided into two classes: 1. Those who open the antrum in all acute empyemas of the mastoid cells. 2. Those who open the mastoid cells without opening the antrum. Possibly a third may be added which occupies an intermediate position between the two. As an exponent of the second class he quotes Politzer, who finds in the majority of his cases no connection between the abscess and the mastoid antrum, and as an exponent of those who would open the antrum in all cases he quotes Schwartze, and as one of the intermediate class, Hessler. His own study as to the advantages of the two methods leads him to render a favorable opinion of the Schwartze treatment, though he asks: Is there a means by which we can combine the two methods? The rules which Urbantschitsch has laid down when the antrum is to be opened in acute empyema are sound, and an operator would be taking many chances to disregard them. If the meningeal symptoms are prominent, if the fistulæ lead toward the antrum, if the posterior wall of the meatus is bulged forward, or when signs of inflammation are localized in this region, then in every case the antrum should be opened. In answer to the question whether, when none of these symptoms are present, it is safe to leave the antrum alone, he says the operator, unless he makes a routine practice to open it, must ask himself: 1. Is it drained? 2. Has it undergone such pathogenic changes that it is a focus of infection? If he is in doubt as to either of these points he must open the antrum. What can or should be avoided, however, is useless curetting of the antrum and aditus. Every time the antrum is opened in acute empyema the first opening should be merely exploratory and as small as is consistent with exploration of the cavity. If there is no empyema of the antrum, no growths nor other pathologic changes, to open it wider and enlarge the cavity so that the abscess is constantly reinfecting itself would seem absurd. If when it is opened no pus wells up, and on careful examination with a probe and by inspection no pathogenic changes are found, then the relations of the parts should be disturbed as little as possible. In this way we can, to a certain extent at least, combine the advantages of the Politzer method with those of the Schwartze.

47. **Pharyngeal Tonsil.**—Wex describes the anatomy of the part and then reports seven cases of tuberculosis, in six of which tubercle bacilli were found, a larger proportion than seems to have been observed by any others.

48. **Aural Complications of Scarlet Fever.**—From his observations von Gaessler comes to the conclusion that there is a relation of middle-ear disease to the exanthem. Simple hyperemia, secretory process, fibrous exudate, form the progressive states of ear disease due to infection. He thinks that ear disease is the usual manifestation of general infection and

not extension of the infectious process in the condition. While the relatively small number of the examinations he has made only suggests the probable invariable participation of the ear in scarlet fever, they show that pronounced inflammatory processes can exist behind the normal or nearly normal drum membrane. In scarlet fever the condition seems analagous to measles and diphtheria in which the ear invariably participates.

58. **History of Typhoid Fever.**—According to Haskins, typhoid fever can be recognized in the literature for over 200 years. Its nature, as distinguished from typhus, has been universally recognized for exactly fifty years.

59. **Etiology of Typhoid Fever.**—The definite cause of typhoid fever is recognized to be bacillary, which appears not merely in typhoid, but in other conditions, as for example leptomeningitis, cholecystitis, and puerperal fever. It is of great importance to recognize the fact that this germ is a possible cause in cases of bad septic or acute inflammatory and other lesions without the characteristics of typhoid. We must, therefore, modify our older views and define typhoid as an infection by the bacillus typhosus. So far as Howard is aware, very little is known as regards individual susceptibility. Certainly not all who are exposed are infected, and one attack usually gives lasting immunity.

60. **Diagnosis of Typhoid.**—According to Hoover, the spleen is universally enlarged in typhoid, and he would hesitate to diagnose the condition where it was not evident. The common method of percussion may not be able to determine it. The better method is to define the position of the spleen by the resistance it affords to the percussing finger, by a sort of palpation rather than percussion. Ileocecal tenderness is another sign which is usually sought in an inaccurate manner. The local peritonitis over the site of intestinal lesions would cause pain, but if tenderness is to be elicited from the ulcerating mucosa of the intestine, it must be opposed against the posterior abdominal wall and then pressure exerted to produce pain. The diseases to be distinguished from typhoid are trichinosis, malaria, septic endocarditis, septicopyemia, meningitis and miliary tuberculosis. The last is the one which we have to distinguish far more often than any other disease. As often as any other sign, the dicrotism of typhoid assists in recognizing the disease. Another constant sign is diminution of the white corpuscles, the hypoleucocytosis. The Widal reaction is found also in miliary tuberculosis, in malaria, and in some cases of sepsis. He sums up the most constant signs as continued fever, flushed face, dicrotic pulse, large spleen, ileocecal tenderness, hypoleucocytosis and the Widal reaction.

61. **Prognosis in Typhoid.**—In the modern uncomplicated case Rogers says the prognosis is good. The conditions that make it unfavorable are persistent high temperature, often up to 103 or 104 F. Laryngitis, especially when it takes the type of perichondritis, is usually fatal. Pneumonia is another serious complication; ulceration can not always be determined. Meteorism adds to the gravity of the case and, if excessive, is an unfavorable sign. Hemorrhages are dangerous in proportion to the amount of blood lost. The prognosis of perforation is always bad. Early insanity is usually fatal, and profound coma is likewise a bad symptom. In cases where the nervous system seems to receive the force of the poison and in proportion to the impression and persistence of it in spite of the treatment, the prognosis should be guarded. The heart suffers in different degrees; there are few cases without some sign of weakness in the middle or later periods, and sudden death may result from very mild exertion. The circulation is an important element in forming our prognosis, and the latter is never to be made absolutely safe until all signs of cardiac disturbance have disappeared.

62. **Management of Typhoid.**—The chief points insisted on by Lee are early confinement to bed, good atmospheric conditions, disinfection, free administration of pure water, care of mouth and teeth, prevention of bed-sores and good nursing.

63. **Feeding in Typhoid.**—Carter reviews the recent literature of feeding in typhoid and points out the inconveniences of an exclusive milk diet, and on the whole, the better showing is in favor of a rather liberal diet, though some statistics show more percentage of relapses, and due caution should be used. He says, in view of the long siege which lies ahead of the typhoid patient, that every means which may be safely used to save the strength should be employed.

64. **Sequels of Typhoid.**—Those mentioned here by Maynard are temporary alopecia, bed sores, pustular dermatitis, which he has observed in one case, mental defects from disturbance of nutrition of the brain and cord, thrombosis of the femoral vein coming on after the patient begins to improve, myocarditis, pneumonia, bronchitis, laryngitis and nephritis. Tuberculosis may develop after typhoid, but the question then arises whether it was not the primary disease.

70. **Uric-Acid Lesions.**—Deficient oxygenation and excessive nuclein-catabolism, according to Croftan, produce a growth of toxic leucomains called the alloxuric bases, which are the true poisons in uratic lesions. Uric acid acts pathogenically only from its tendency to form concretions; the alloxuric bases entering the blood-current prepare a nidus for the deposit of these concreations, which in their turn act as mechanical irritants in the different tissues, in the joints as in gout, and in the kidneys. The indications for treatment are: 1. To raise oxygenation, which can be done by oxygen inhalations, and in addition to this iron and arsenic, together with hygienic measures, such as massage, hydrotherapy, electricity, regulated diet, etc. 2. To regulate nuclein-catabolism, and this is chiefly done through regulation of the diet, in excluding foods which contain nuclein or alloxuric bases. Thus internal organs such as the spleen, liver, sweet-breads, kidneys, brains, etc., are forbidden. Soups, meat extracts and broths are unadvisable. Raw, dried, cured and smoked meats are to be condemned; boiled, fried and stewed meats are permissible. The starches, sugars and fats are harmless as long as they do not disturb the digestion. Alcohol is absolutely harmful. Tea, because of some of its alkaloids, is forbidden, but coffee is harmless. Water can only act beneficially. 3. The elimination of alloxuric bases and soluble urates and, on account of the very irritating action on the kidneys, Croftan prefers to avoid diuretics and promote sweating by hot baths, massage and friction treatment. The salicylates, being diaphoretics, are also useful in this way. The alkalies act similarly and also neutralize lactic acid. The so-called specifics, guaiacum, colchicum, potassium iodid, etc., are uncertain in their action and he does not use them. 4. This indication is the removal of uratic secretions. The so-called solvent action of certain agents is altogether fictitious. The theoretic remedies used in these cases are not yet established. The best treatment of the mechanical condition is necessarily mechanical. He employes counter-irritation, heat and cataphoresis for this purpose. Cantharidal collodion painted over the inflamed point often relieves pain and lessens irritation, and heat can be applied with a simple apparatus made with a stovepipe and lamp as well as with the more expensive ovens so generally advertised. Cataphoresis is indicated in chronic cases of gout with old deposits. The fingers and knuckles being elaborately cleaned and wrapped with borated absorbent cotton moistened with a solution of iodid of lithium, are placed on a metal plate connected with the negative pole. Above the fingers is placed a metallic electrode of the galvanic battery connected with the positive pole. About 20 milliamperes, for ten minutes, are sufficient, massage of the joints following. As the uratic diathesis is a hereditary condition, its cure in one generation is not to be expected. We are limited to an intelligent prophylaxis, carefully regulated mode of life, and treatment of special manifestations. In this way the perversion may possibly be educated back to the normal.

88. **The Schott Treatment.**—Turner's article is a severe criticism of the methods at Bad-Nauheim, in which he arraigns Professor Schott, whose name has been attached to this well-known bath and gymnastic treatment of cardiac diseases, as an advertising charlatan, and gives instances which he thinks show his unreliability, ignorance and cupidity. He finds, he says, also, by inquiries among medical men in Germany, that this idea is largely held in regard to him.

102. **Invalid Diet.**—Irwin thinks that fevers are underfed and gives his own experience in using a more liberal diet than has generally been recommended. Twenty cases of typhoid fever in which were allowed dry toast, soft poached or boiled eggs, etc., as soon as they showed any appetite, contrasted favorably with twenty-five cases in which milk was the chief diet and soft toast only allowed after a normal temperature had been maintained for two days and stopped if it rose again. The question, he says, is not one of solid or liquid food, but one of digestibility.

103. **Mastoiditis.**—From his experience, a sample of which is given in a report of seven cases, Tuttle sums up the treatment of mastoiditis as follows: In all cases of purulent otitis media there is more or less involvement of the antrum. In acute otitis media with symptoms of mastoiditis we are justified in using palliative measures for twenty-four hours. To delay operative measures more than twenty-four hours without marked improvement is, however, not justifiable. The incision in the posterior superior wall of the auditory canal is far superior to Wylde's incision as a depleting measure. All cases of chronic purulent otitis media resulting in mastoiditis should be operated on at the first appearance of symptoms without resorting to palliative measures, and the author claims that we are justified in opening the antrum for drainage in chronic cases of this condition without symptoms of mastoiditis.

105. **X-Ray.**—Horsky discusses the fallacies of the X-ray, showing that skiagraphs are not entitled to the credence given to ordinary photographs. He has also corresponded with several prominent surgeons concerning the status of the X-ray in legal medicine, and has obtained no positive reply. There appears to be much diversity of opinion in regard to it among surgeons, though few judges have objected to it. He maintains that the skiagraph in any case should be taken by an expert. The physician should accompany his patient to the examiner, or, if he himself takes the photograph, a witness should be present. Before taking the picture both parties should verify, with the fluoroscope, the anatomic position of the part with reference to the plates and tubes, and it is also necessary that the part be taken in several positions. If the picture is introduced in evidence, or if its exclusion is attempted, the examiner should be required to demonstrate in detail just how it was taken. Finally, it being perfectly practicable, the apparatus itself should be brought into court and the jury be allowed to examine the part with the fluoroscope. He thinks the time is not far distant when this method will be in vogue. In conclusion he suggests the following as an ethical consideration for the physician or surgeon: If ever occasion requires one to take a skiagraph of a case treated by another physician, do not under any consideration allow the patient to get hold of the picture, for should any deformity or abnormality, real or fancied, appear, it may act as an incentive to bring an action. If a photographer is employed he should be charged not to give out any copies of the picture except to the physician.

108. **Fallacies in Rectal Surgery.**—The fallacies mentioned by Matthews are the use of the long tube in the diagnosis of rectal disorders and the existence of rectal valves. He quotes a number of authorities to support the opinion that these valves do not exist. He says he has looked for them for years and has yet to find them.

110. **Neurasthenia.**—Pope's summary of the treatment of neurasthenia is: 1, rest—curtailment of energy; 2, partial rest; 3, exercise; 4, diet; 5, insistence on drinking large quantities of water; 6, massage; 7, electricity; 8, hydrotherapy.

116. **Insane Asylum Laboratories.**—Barker considers the special subjects of pathology and bacteriology and their study in institutions for the insane, and enumerates the advances and results in these studies. He makes a special point of the importance of clinical work in these, and the co-operation of such with laboratory investigation.

117. **Constitution.**—Bell offers a vitalistic theory of the phenomenon of organic life, and defines what we call constitution "as an individual peculiarity of co-operative and reciprocal work of life." That is to say, it is the control of energies and forces by the animistic principle as shown in individual cases, including heredity or transmitted peculiarities, and the individual variations in growth, proliferation, nutrition, etc.

119. **Hyperpyrexia.**—A patient reported by Alexander suffered from recurrent attacks of what at first was diagnosed appendicitis, but which seemed to be associated with obstruction of the bowels. There was great abdominal distention, discoloration, stercoraceous vomiting, and a temperature which ranged, in the different attacks, as high as 112 to 113 F. Besides the fecal material, the evacuations, which sometimes were absent for a number of weeks, contained blood and pus and mucous exfoliation during the attacks. According to the patient's own statement, there had been no evacuation containing fecal material in the last two years. The patient takes three meals, but vomits a few hours after eating and has stercoraceous vomiting about every four or five weeks, greatly relieving the tension.

120.—See abstract in THE JOURNAL, XXXV, p. 1500.

121.—Ibid.

122. **Decinormal Salt Solution.**—The value of this salt solution is studied under various conditions, by Burke, who recapitulates the indications for its use under two heads, where the circulation needs filling, or when the poisons in the blood are to be diluted. Where these indications are to be met no agent will take its place. It fills the blood-vessels, and thus gives the heart something to work against. It furnishes a medium for the corpuscles to circulate in which carries nutrition to the tissues. It produces free diuresis and diaphoresis, thus liberating poisons. It delivers to the tissues two of the most essential life-giving compounds and dilutes poisons and renders them less active. It gives a respite during which we may act or in which the alarming symptoms may subside.

FOREIGN.

British Medical Journal, January 12.

Observations on Wind Exposure and Phthisis.—WILLIAM GORDON.—From an analysis of the statistics of the rural districts of the county of Devon, Gordon finds that while soil has some effect on phthisis mortality if the influence of wind exposure is removed, the chief effect is entirely due to the latter. The condition of the temperature, soil or air can not account, in his opinion, for phthisis, nor can the occupation as given in the statistics of these rural districts. It seems manifest, therefore, that for St. Thomas, Newton Abbott, Okehampton, and probably Devonshire generally, the paramount influence which now determines the higher or lower rate of phthisis is the degree of exposure to or shelter from the west and southwest winds.

Jaundice in Typhoid Fever. GEORGE OGILVIE.—According to the author jaundice is hardly as rare and fatal a complication of typhoid fever as has been thought, and he reports four cases upon which he comments at length. It is a most unusual occurrence, however, that jaundice should appear at the onset of the disease and gradually disappear with the falling off of temperature and lasting through the whole course of the disease which yet has favorable terminations. In his own cases the diagnosis has been established beyond a doubt by the Widal reaction, taken with other symptoms. The relations of morbus Weilli to typhoid are discussed, and the author seems to believe that properly it is only a form of typhoid. The one case in which the agglutination failed to follow does not, he thinks, prove anything to the contrary, since the reaction was only tried once in the early stage, when it may fail also in true typhoid. As regards the pathologic condition productive of jaundice it is largely a matter of conjecture, but it seems almost certain that it is not of catarrhal nature. The rarity of catarrhal jaundice finds a natural explanation in the fact that the stomach and adjacent parts of the intestines are scarcely ever implicated in typhoid processes. Ogilvie is inclined to think that there is some direct action of specific microorganisms on the liver and bile-channels in these cases.

The Lancet, January 12.

Pneumococcic Arthritis. EDWARD J. CAVE.—The author first reports a typical case of the acute suppurative form of pneumococcic arthritis and analyzes 31 cases from the literature in tabulated form. The majority of the cases occurred in immediate association with pneumonia (28 out of 31.) The arthritic symptoms usually followed the onset of pneumonia from a few days to a fortnight, but in two instances they are said to have preceded it. The disease is a fatal one, 25 out of 31 having died. The affection is one of adult and advanced life and far commoner in males than in females. Both these peculiarities may stand in relation to predisposing influence or previous damage to the joint. Arthritis is commonest in the lower extremities. In 19 of the cases the inflammation was confined to a single joint, and the larger joints, excepting the hip, seem more likely to be infected. In all the cases but one included in the table, the pneumococcus was demonstrated in the fluid in the joint; but similar cases have been observed in which the pus has been found sterile. It has been suggested by Widal that the pathology may be the same, but the cocci had died out at the time of examination, or the joint affection may be due to toxins produced elsewhere in the body. Another case is reported which is not included in the table, because the organism cultivated from the blood was not identified also by animal inoculation. While its culture characteristics seemed like those of pneumococci, unfortunately, owing to the pressure of professional work, it was not experimented with further before it died out. As noticed, infection is liable to attack a previously damaged joint, and the experimental observations of numerous observers show that the injection of virulent cultures of pneumococcus directly into the joint of a susceptible animal is almost invariably followed by acute suppurative arthritis. The subcutaneous injection of virulent cultures after the previous excitation of an aseptic inflammation in the joint, whether by direct injury or by injection of turpentine, gives varying results, in many instances negative (Gabbi) and in many positive. (Ausset, Zuber.) The intravenous injection of virulent cultures with associated aseptic traumatism of the joint leads to arthritis much more certainly than do injections hypodermically. Finally Bezançon and Griffon have succeeded in producing experimental pneumococcic arthritis by modifying the resistance of animals experimented on in relation to the virulence of the pneumococcus. They find in a rabbit partially immunized that a large full dose of virulent culture produces local lesions rather than general sepsis, especially in the form of pneumococcic arthritis. Leroux, who has summarized these experimental investigations, suggests the correspondence with the clinical experience that arthritis usually supervenes after a pneumonia has run its course or toward the end of an attack when the condition of greater or less immunity has been acquired. The clinical characteristic symptoms vary in severity. Fever is generally high. The prognosis is grave both as regards danger to life and the safety of the joint. Constitutional infection is liable to occur, producing its characteristic localizations in the endocardium, meninges, and other tissues. The treatment in suppurative cases, which are the majority, should be the use of asepsis, incision and flushing of the joint, drainage and fixation, as in other suppurative arthrites. The author questions whether arthrotomy for the removal of the morbid products, avoiding important ligaments and tendons would not be followed by speedier cure and better results. Convalescence is apt to be tedious and prolonged, and stiffness and adhesions remain which must be treated on general principles.

The Relation of the Bowel Lesion of Typhoid Fever to the General Symptoms of the Disease. T. J. MACLAGAN.—The local disturbances of the intestinal glands, according to Maclagan, are the consequence of the organic growth in the tissues of millions of the organisms produced. This would not be serious were it not for the fact that it leads to sloughing and suppuration, and these bring into play other organisms much more pathogenic than the typhoid bacillus. The existence of these organisms in the system can be determined by the prolonged duration of the fever, high temperature and other alarming symptoms, which are not due so much to direct action of the typhoid bacillus as to the various cocci associated. Gangrenous ulcers in any part of the body are apt to cause specific poisoning, and this is especially so in typhoid fever, because of the number of ulcers and consequent foci of infection. The point specially made, therefore, is that while all the symptoms of typhoid fever are traced back to an action set going by the typhoid bacilli, no one of its serious symptoms or specific dangers is due to the direct action of that bacillus.

The Practitioner, January.

The Epidemiology of Rheumatic Fever. ARTHUR NEWSHOLME.—The author finds that the epidemiology of rheumatic fever is dependent especially upon dryness and lowering of the ground water. The association of dampness of the air and soil with rheumatic pain is due to the common lack of distinction between chronic and acute rheumatism, two different disorders. The organism of acute rheumatism is one which lives in the soil, but is driven out when the ground water becomes high; it multiplies rapidly in dry years and is transmitted to the human recipient in some unknown way, possibly by the dust. This is his explanation of the facts, subject, of course, to further additions to our knowledge. Perhaps bacteriology will be able in coming years to more fully explain them.

The Pathology of Rheumatic Fever. F. J. POYNTON.—Poynton reviews the various theories of rheumatic fever, the nervous, toxic, chemical, infectious, and malarial theories, and gives at length a description of the cocci found by himself and Paine, to which he attributed the causation of the disease. He thinks that the diplococci are destroyed at the sites of local lesions, though their destruction usually results in some damage to the important tissues in which they have been localized. This explains the fleeting character of the symptoms in acute rheumatism. The worst manifestation of rheumatic fever is usually pericarditis, and in such cases he has obtained the most virulent cultures of the organism. The relapses that are so frequent, he thinks, can be explained by a certain form of the coccus that persists, recovering virulence if the vitality of the tissues is lowered by exposure, premature exercise, or possibly improper diet. The problems of heredity, etc., are yet to be elucidated.

Rheumatic Fever in Relation to the Throat. ST. CLAIR THOMSON.—The throat affections of rheumatism and the theory are treated of by Thomson, who summarizes our knowledge as regards throat affections as follows: 1. It is undoubted that a certain number of cases of acute rheumatism are preceded by an angina in a proportion varying from 30 to 80 per cent. 2. Both rheumatism and angina have many etiological points in common—season of year, cold, wet, fatigue, depression, vitiated air, etc. 3. The connection of angina and rheumatism, though undoubted in a number of cases, is not yet clearly established. 4. The tonsil may be the port of entry of the rheumatic virus, and this even although the naked-eye appearance of the throat gives no indication of its being affected. 5. The particular affection of the throat which is associated with rheumatism is not yet established. Apparently it is not peritonsillar abscess (quinsy). 6. Peritonsillar inflammation does not appear to be arrested by the administration of antirheumatic remedies. Many cases of parenchymatous and lacunar tonsillitis, on the contrary, are considerably benefited by the administration of salicin or salicylate of soda. That this action proves the rheumatic nature of the disease can not yet be accepted. 7. The question requires further research in two directions: one in differentiating the various forms of angina and determining the one which is associated with rheumatism; the other in further research to discover the true nature of rheumatism.

The Effects of Rheumatic Fever on the Heart. G. A. GIBSON.—The author deals with the production and nature of the cardiac lesions of rheumatism, and the methods of treatment. It is highly probable, he thinks, that all cases of acute and subacute catarrhal disease are of microbic origin and therefore infective. The recent work of Poynton and Paine goes a long way to explain the connection of the microbic in-

fection with acute rheumatism. When these organisms attack the heart it is due, he believes, to their circulation in the blood. The indications for treatment are: to avoid rheumatic implication of the heart; to enjoin absolute bodily rest, so that the work the heart is obliged to do is reduced to a minimum. He therefore holds that from the first moment of attack of acute rheumatism until some days after it has entirely ceased, the patient should be compelled to retain a horizontal position. The diet should be unstimulating, not introducing too much animal proteid matter, and it should contain abundance of fluid, so as to bathe the tissues freely. In the earlier stages of acute rheumatism the best form of diet is milk, though later a more liberal diet may be allowed. As regards drugs he believes in the use of salicylates in full doses until every symptom has disappeared, and then he begins to use absorbents, of which the most satisfactory is sodium iodid, giving 10 to 15 grs. three times a day. If there is an appearance of anemia, some iron preparation may be administered. No heart stimulants should be employed until later. Through the whole course of the disease an occasional mercurial aperient should be administered every few days. Another method which seems to him of value, is counter-irritation, though it is not easy to explain how it acts, but he is convinced of its utility.

Rheumatism in Childhood. GEORGE F. STILL.—After reviewing the progress of rheumatism in childhood, Still believes that it is evident that it is very common in the later periods. During early childhood, however, rheumatic phenomena are very infrequent, and in infancy rheumatism is almost unknown. The symptoms differ from those in adults chiefly in the character of the joint manifestations and the greater prominence and frequency of heart affections. He calls attention to pains in the limbs complained of by children, the so-called growing pains, which he thinks are often evidence of rheumatism, and the practical importance of their recognition can hardly be overrated. He also mentions the frequency of affections of the hip-joint in juvenile rheumatism and the limitation of the pain to one joint for a longer time than is common in older cases. This affection of the hip-joint usually suggests commencing tubercular disease. Another symptom is the stiff neck, which seems trivial, but, like the vague pains and stiffness of the limbs, may be followed by severe cardiac involvement. The frequency of cardiac affections is also one of the most characteristic features. In 170, as far as possible consecutive, cases, 128 had cardiac bruits, which in 93 were certainly due to endocarditis. Wasting is also a more notable feature in cardiac rheumatism of childhood, and a very important manifestation of rheumatism in childhood is the rheumatic nodule. While in adults they are rare, they occur in children so frequently as to be of much importance. He found them in over half of his cases, and their close association with endocarditis is of decided clinical importance and has a bearing on the prognosis. Another symptom of rheumatism in children is sore throat. Tonsillitis is so commonly present that it is difficult to escape the conclusion that it has some direct relation, possibly as a medium of infection with the disease. Rheumatic hyperpyrexia or cerebral rheumatism is almost unknown in childhood. Among the immediate symptoms he mentions stomach pains, pain in the side, headache, and nervous symptoms, such as somnambulism, night terrors, habit spasm; another ailment several times observed associated with rheumatism in children is lienteric diarrhea, which is also a nervous phenomenon. In conclusion he mentions one further phenomenon, the association of red hair with rheumatism and heredity. He says the color of the hair may seem a small point, but it is one of the many little indications which are sometimes of value.

Presse Medicale (Paris), January 2 and 5.

Prevention of Alimentary Stasis. A. MARTINET.—By reclining on the right side about half an hour after meals, and drinking in this position a cup of hot chamomile or linden tea, the contents of the stomach are rendered more fluid and their escape from the organ is accelerated by the force of gravity. In a few minutes to half an hour the patient is relieved of all the symptoms of alimentary stasis.

Dyspeptic Neurasthenia. BARDET.—Neurasthenic conditions proceeding from latent dyspepsia are common. The latter is due as a rule to excessive amounts of nitrogenous foods. This abuse keeps up hyperchlorhydria, and this in turn liberates in the blood an excessive amount of sodium. If there is hepatic insufficiency, the sodium renders the organic fluids alkaline. The first effect of the hypoacidity is usually manifest in a neurasthenic condition, and nearly all cases of pseudo-neurasthenia are due to this cause. The amount of nitrogenous food ingested should be reduced to .5 or .75 gm. to the kilogram, not allowing more than 1 gm. at any time. This is sufficient to restore the acidity to normal; the same result can be attained with dilute phosphoric acid, 1 to 3 gm. a day, or even more. Bardet adds that he has never seen any serious ill effects follow its use in the hundreds of patients he has treated with it, but larger doses are somewhat laxative. Cautru has taken 100 drops of dilute phosphoric acid a day during a period of two years without inconvenience, but Weber has observed intolerance in one patient for more than 40 drops.

Quinin in Uterine Therapeutics. P. DALCHE.—Quinin is useful in congestive dysmenorrhea, moderating the rush of blood to the genital regions, and is also useful in the dysmenorrhea due to neuralgia in this region, which Dalche thinks is more frequent than is generally recognized. It is possible that it might prove effective in amenorrhea, arousing the contractility of the uterus and of the utero-ovarian vessels, thus stimulating torpid ovulation. It is most effective, however, in metrorrhagia and menorrhagia not associated with any organic trouble. This dose is usually .5 to 1.5 gm. and Dalche combines it with digitalis or ergot as indicated.

January 5.

Leprosy in the Indo-Chinese Peninsula. E. JEANSELME.—The immense valley of the Irrawaddy is a focus of endemic leprosy, and an estimate of 25,000 is probably less than the actual number of lepers in the peninsula comprising Siam, Annam, etc. No organized efforts have been made to isolate them. In a large number of cases traced by Jeanselme the infection was brought into the French colonies by Chinese settlers.

Centralblatt f. Chirurgie (Leipsic), January 5 and 12.

Prevention of Shortening in Fractures of the Leg. N. KAEFER.—A plaster cast is applied to the leg and, just before it hardens, is cut in two parts by a circular incision entirely around the leg a little above or below the fracture. The two parts are then pushed gradually farther and farther apart by a mechanical contrivance which is firmly fastened to the upper and lower portions of the cast with plaster bands, and which consists of an iron rod with a screw thread at each end, winding in opposite directions and fitting into a solid female screw which forms part of a long, thin iron plate at each end. By turning a nut on the rod in the center, the two screws are forced apart. This nut is turned half or completely around every day, with no discomfort to the patient, and the fracture heals with no shortening. The apparatus is also indicated to prevent shortening after oblique osteotomy.

Resuscitation by Manual Compression of the Heart. H. MAAG.—THE JOURNAL described, in its issue of July 21, 1900, p. 180, the successful experiments of Prus in the resuscitation of dogs by manual compression of the heart and blowing air into the lungs through a tracheal canula, long after apparent death from chloroform or electricity. Maag reports a case of death in chloroform narcosis after operation for nerve-stretching for rebellious sciatica. After all other attempts at resuscitation had failed, Prus' directions were followed. The heart responded promptly to the manual compressions and in half an hour the first natural respirations were perceptible. In an hour the breathing was deep and regular, the heart beating powerfully 70 times a minute, and an hour later the patient was put to bed apparently saved, although consciousness had not returned. A few minutes later respiration ceased again, and in spite of renewed efforts could not be restored. The heart continued beating for eight hours longer and then suddenly stopped, the temperature gradually falling. The air had been blown into the lungs by the mouth of an assistant.

and a large portion had found its way into the alimentary canal. This caused meteorism which forced up the diaphragm and nullified, in great degree, the efforts at artificial respiration. Prus pointed out that the diaphragm is the first to respond and take up the task of respiration. The patient was resuscitated ten to fifteen minutes after all pulse and respiration had ceased and he was cool and cyanotic. The narcosis commenced at 8; by 11:30 he was breathing regularly; by 2 all danger was apparently over, and a few minutes later respiration ceased, but the heart kept beating powerfully till 4 p.m.

January 12.

Recent Luxation of the Peroneus Tendon. H. REERINK.—A case is related in which the tendon was replaced and held in its groove by strips of adhesive plaster (Unna's zinkpflaster), and a plaster cast applied in a few days. Massage completed the cure.

Simplification of Plastic Achillotomy. O. BAYER.—Instead of the ordinary oblique division of the tendon Achilles in the treatment of spastic paralytic talipes equinus, Bayer makes the discission in two right angles facing in opposite directions, something the shape of a step. He has been very much pleased with the results attained and now states that he has succeeded in making this discission by subcutaneous tenotomy, without exposing the tendon, omitting the connecting longitudinal incision. The intact skin brings the parts into correct position. In sixteen days the patient was walking normally with both feet.

Dermatologische Zeitschrift (Berlin), December, 1900.

Lupus and Carcinoma. E. HOLLAENDER.—In three cases, old, rebellious lupus erythematodes became complicated with multiple carcinoma, relatively benign, and all were cured by excision of the carcinomatous nodules, with no recurrence. Hollaender is inclined to attribute the etiology to the mechanical injuries of the regions affected by lupus by the repeated therapeutic measures applied.

Deutsche Med. Wochenschrift (Leipsic), January 10.

Pentose in Bacteria. E. BENDIX.—An osazone has been derived from tubercle bacilli by Bendix which possesses all the characteristics of pentose, and he has established that the nucleo-proteid of the bacilli is the bearer of the pentose group. Tuberculin preparations therefore do not contain the pentose radical. Pentose was also found in a mixture of bacteria from feces, and pentosane was distinguished in some bacilli, including those of diphtheria, but never in certain others, as for instance, the typhoid bacilli.

Vaginal Incision for Tubercular Peritonitis. G. BAUMGART.—More than 35 cases of tubercular peritonitis operated on by Loehlein are reported and the superior advantages of the vaginal route extolled. A number of these were described by Loehlein two years ago (*Gyn. Tagesfragen*, v. p. 99), but his example in opening the abdominal cavity through Douglas' pouch does not seem to have been followed. In some of the cases a small secondary incision was also made in the anterior abdominal wall. In the pure uncomplicated cases treated by posterior colpoceliotomy the patients were discharged in nine to twenty-two days after the operation.

Skiagraphy of the Stomach. W. BECHER.—This communication states that an empty soft-rubber tube introduced into the stomach cast a distinct shadow in all the writer's skiagraphs. When he wished to fill the tube with a bismuth solution he inserted the tube first and took a skiagram and then filled the tube with the solution through a funnel. The patient stood with his back to the focus-tube.

Thymus Death. H. KOHN.—At the autopsy of a seven-months' child who had died after two days of distress and cyanosis, a very large thymus was found, compressing the aorta like a truss. The artery beneath it and the heart were very much dilated and the latter hypertrophic.

Rattle-Snake Poison in the Cure of Leprosy. J. GOLDSCHMIDT.—Dr. A. M. de Moura announced in the issue for November 29 that he had been using rattle-snake poison in the treatment of fifteen lepers at San Paulo, Brazil, and had been much encouraged by the unmistakably favorable effect of the medication. He first established the effective and safe dose by experiments on dogs and administered it internally or by subcutaneous injection. This poison has been used by the natives for a long time in the treatment of various skin affections and leprosy, and numerous instances are related of complete cure of leprosy after rattle-snake bite. Lewin makes the comment that any albumin which possesses the property of inducing irritation by a special chemical energy is able to induce such a modification of the existing conditions that marked benefit may result. No specific action is necessary. J. Goldschmidt, in the present number, describes a case of a leper bitten by a rattle-snake. He succumbed in twenty-four hours, but during this interval all the lepromata softened and subsided. A local physician attributed this effect to the methemoglobinemia caused by the poison, and treated another leper on this principle, giving him 45 gm. of potassium chlorate in sixty hours. The intoxication was very severe and nearly fatal, but on the patient's recovery a week later, the cutaneous affection was remarkably improved. Goldschmidt warns against energetic therapeutic measures in leprosy, as the patient's resisting powers are very feeble. But all the more urgently he recommends prompt and effective measures in the early, curable stages, when the lesion is restricted to the nasal mucosa or to the cheek near the nostrils. He cites cases of complete cure, including one published in the *Bull. Med.* in 1895, in which there has been no recurrence in ten years. He advises tuberculin as a differentiating measure. For local treatment he finds nothing so effective as europhen or some similar substance generating nascent iodin. Success depends on promptness and perseverance.

Importance of Indicanuria in the Pathogenesis of Certain Affections. WOLOVSKI.—Indicanuria is the sole cause of many acute and chronic affections which are promptly cured by measures that banish the indicanuria. These conclusions are based on the study of forty-four patients, and impel Wolovski to ascribe an important place in pathology to indicanuria. In several cases of trophic cutaneous neuroses—erythema, urticaria and eczema—the indicanuria was apparently the sole cause; at least they vanished in two or three days with appropriate treatment of the excess of indican, i. e., of the putrefactive processes in the intestines. It also proved to be the sole cause in several cases of the vertigo that follows chronic overfilling of the intestines, in one case of epilepsy and in a large number of gastric disturbances accompanied by disorder of the small intestine. The absence of indicanuria in case of gastric disturbance excludes an intestinal complication and is thus a valuable differentiating measure in dubious cases. He found the most effective treatment a rectal injection of two quarts of water on retiring and the next morning calomel and jalap, 1 gram each, the patient drinking copiously of some mucilaginous fluid. Chance suggested the most effective remedy to prevent recurrence of a chronic tendency, namely, mercuric iodid, not more than 5 mg. at one dose, in keratin-coated pills, two a day. In eight to ten days the amount of indican is materially diminished. Ingestion of certain foods produces indicanuria in some persons. Wolovski describes a modification of Jaffé's test for indican in the urine which requires only thirty minutes and enables amounts of indican from one-fifth to eight times the normal quantity to be determined. He adds that it is important to note the relative amount. In two cases, one of hysteria magna, he found the amount subnormal. He uses for his test pipettes graduated to hold twenty drops to the cubic centimeter. One pipette is filled with sodium or potassium hypochlorite containing 1 per cent. active chlorin, and another with the same diluted to one-tenth, thus containing 1 per 1000 chlorin. Ten c.c. of a 25 per cent. solution of lead acetate is mixed with urine to make 100 c.c., and the whole is shaken and filtered. If the urine is very high colored it should be diluted one-half. It must also be freed from albumin. Five narrow and tapering test-tubes holding each 5 c.c. of the colorless urine are placed in a row and to the first, one drop from pipette No. 1 is added; to the second, one

drop from No. 1 and five drops from pipette No. 2; to the third, two drops from No. 1; to the fourth, two drops from No. 1 and five drops from No. 2; to the fifth, three drops from No. 1. The test tubes are turned around twice and then warmed for two minutes. Five c.c. of hydrochloric acid of 1.19 specific gravity are then added to each test-tube. They are then closed with rubber stoppers, turned around two or three times and set aside for four or five minutes until cooled. To each tube is then added 1 c.c. chloroform, and the tube is turned around ten times. If the amount of indican in the urine is normal, the depth of the tint increases to the third test-tube and then decreases until in the fifth glass the fluid is colorless. If the amount is above normal, the tint increases progressively in each glass. In this case the series of test-tubes can be carried out indefinitely until the fluid finally becomes colorless, which in some cases occurs in the fifteenth tube. If the quantity of indican is subnormal, the fluid may be almost colorless in the first tube. The amount of indican is calculated from the fact that one drop of the solution containing 1 per cent. chlorin, in pipette No. 1, corresponds to 10 cg. chlorin in one liter of urine. If, for example, 1.5 drops were used for 5 c.c. urine, out of a total of 1600 c.c., this is equivalent to 15 drops to the liter of urine and 24 drops for 1600 c.c. The quantity of chlorin varies from 20 to 30 cg. in the urine for twenty-four hours. It averages 25 cg. (making allowance of 11 per cent. for the 10 c.c. of the solution of lead acetate added). This is the absolute amount. It is much more important to determine the relative amount in comparison with the solid constituents of the urine, namely, the coefficient of indican. This is readily accomplished by the aid of Haeser's multiplying formula (2.33). For example: 1600 c.c. urine, specific gravity 1.018: multiply 18 by 2.33. This gives 42 gm. to the liter and 67 gm. to 1600 c.c. The average is 60 to 70 gm. and 6 to 7 mg. of indican, i. e., 65 gm. solid substances and 6.5 mg. indican. Assuming the normal amount of chlorin to be 26 cg., we have the following proportions, 65 : .006 : .26, or the practical equivalent, 10 : .001 : .4. This can be accepted as the standard for the determination of the amount of indican. A woman excretes 40 gm. solid substances; the normal amount of chlorin in her case is 1* cg. A man excretes 90 gm. of solid substances, and for him the normal amount of chlorin is 36 cg. These are the normal amounts in these instances, although they differ widely from the average absolute amount, 26 cg.

Muenchener Med. Wochenschrift, January 1.

Treatment of Club-Foot in the Adult. O. VULPIUS.—Thirty-seven patients between 13 and 35 years of age have been cured of club-foot by Vulpius, two years having elapsed in the case of 26 and four years in 15. A number of cases are described, with illustrations showing the condition before and after treatment, which was carried out without sacrificing or mutilating the bones in any way. Subcutaneous tenotomy of the tendon Achilles is always done; the plantar aponeurosis is occasionally divided, the posterior tuberosity of the calcaneum exposed and pulled down with hooks. Transplantation and shortening of the tendon were valuable aids in correcting the deformity and in two cases supramalleolar osteotomy was performed. No splints nor troughs are applied, except a night splint in congenital talipes. The success is due to "modeling correction of the deformity," kneading the foot, stretching the shortened soft parts on the concave side from the skin to the capsule of the joint, until the foot can be brought into an overcorrected position without effort and without springing back. It is not necessary to try to complete the process at one sitting, especially in adults. Each sitting concludes with the application of a plaster cast to maintain what has been accomplished. Tenotomy of the tendo Achillis is the last step. The cast is kept on between two and four months. Massage and exercises are useful in the after-treatment, but are not indispensable, as the resumption of the patient's occupation usually produces the same effect, but more slowly.

Disturbances in Sensibility of the Skin With Affections of Internal Organs. H. HAENEL.—The writer of this communication has noticed certain circumscribed zones of hyperalgesia in cases of affections of the internal organs, especially with gastric disturbance. They are evidently reflex, and suggest an explanation for some of the nervous, rheumatic hysterical symptoms of which patients complain. When found they substantiate the patient's assertions and confirm the existence of an internal affection.

Nitropropiol Test for Sugar. F. V. GEBHARDT.—Nitropropiol tablets are compressed from orthonitrophenyl—propiol acid and sodium carbonate. One tablet dissolved in 10 c.c. water is an efficient test for grape sugar in urine. Ten drops of the urine added and slowly heated turn the fluid indigo blue in case sugar is present, and insoluble indigo is deposited. This reaction does not occur in the absence of sugar and is hence, a simple, delicate and inexpensive test.

Wiener Klinische Rundschau, December 30 and January 6.

Tuberculosis Pseudoleukemica. E. FERRARI.—Sternberg was able to collect, in 1898, eighteen cases of a peculiar tuberculosis of the lymphatic system, and asserted that a large proportion of the cases assumed to be pseudoleukemia in reality belonged to this group of tubercular affections. Ferrari describes a typical case which terminated fatally in five months. When first seen the diagnosis of febrile pseudoleukemia was made, and under treatment with arsenic the enlarged glands subsided. Two months later the patient returned with acute miliary tuberculosis, which soon proved fatal. The lymph glands and whitish foci in the organs were typical specimens of the lesions in the "peculiar tuberculosis" described by Sternberg. They were also found in the muscles, a fact never before noted.

January 6.

Tabes and Diabetes Mellitus. J. PAL.—Diabetics sometimes exhibit symptoms suggestive of incipient tabes. Pal describes a case in which the symptoms and post-mortem findings indicated that endarteritis and tabes had developed simultaneously on a foundation of syphilis, and that the endarteritis had in turn generated diabetes mellitus. The tabes was not very pronounced, but unmistakable old tabetic lesions were found in the spinal cord.

Cure of Psychic Epilepsy by Operation. A. PILCZ.—A young man was affected periodically with mental confusion, hallucinations and generally altered character, suggesting a periodic mental affection. A linear scar above the right frontal eminence, about 4 cm. long, the result of a fall ten years before, was extremely painful on pressure. This scar was excised and the psychosis was cured. A few months later it returned in a mild form after severe alcoholic excess, and the wound was again painful. The patient has since discontinued the use of alcohol and the cure has been permanent. The case emphasizes the importance of abstention from alcohol by persons with an epileptoid tendency.

Wiener Klin. Wochenschrift, December 27 and January 3.

Extirpation of the Spleen. K. SCHWARZ.—In the case described, a woman of 36, in the fifth month of pregnancy, had a hypertrophic wandering spleen removed, which had caused her much suffering and inconvenience for two years. Pregnancy was not disturbed. The results were so satisfactory in this and in other cases Schwarz has collected, that he advocates extirpation for all cases of wandering spleen as the simplest and safest operation unless it is complicated by numerous adhesions. If the organ is hypertrophic, splenectomy is the only method of treatment.

January 3.

Treatment of Ulcerations With Hot Air. K. ULLMANN.—The rapid and beneficial results of local hyperemia from the application of hot air in the treatment of chronic and infectious ulcerative processes have already been proclaimed by Ullmann. He now reports and illustrates a number of cases cured by his apparatus and advocates the method for venereal ulcers and all ulcerative processes, particularly of the genital tract. He has noted repeatedly a favorable influence on the general health and remote morbid foci, and describes, among others, a case of arrest and cure of a serpiginous venereal infectious process.

Books Received.

Acknowledgment of all books received will be made in this column, and this will be deemed by us a full equivalent to those sending them. A selection from these volumes will be made for review, as dictated by their merits, or in the interests of our readers.

KING'S COLLEGE HOSPITAL CORPS: Being the Annual Report of King's College Hospital and the Medical Department of King's College. Edited by Norman Dalton, M.D., F.R.C.P., Albert Carless, M.D., F.R.C.S., John Phillips, M.A., M.D., F.R.C.P., W. D. Halliburton, M.D., F.R.S. Vol. VI. (Oct. 1, 1898-Sept. 30, 1899.) 8vo. Pp. 298. Price, 7s. 6d. London: Adlard & Son. 1900.

PHYSICAL DIAGNOSIS IN OBSTETRICS. A Guide in Antepartum, Intrapartum, and Postpartum Examinations for the Use of Physicians and Undergraduates. By Edward A. Ayers, M.D., Professor of Obstetrics in the New York Polyclinic; Attending Physician to the Mothers' and Babies' Hospital. With Illustrations. Cloth. Pp. 283. Price, $2.00. New York: E. B. Treat & Co. 1901.

INTRODUCTION TO THE STUDY OF MEDICINE. By G. H. Roger, Professor Extraordinary in the Faculty of Medicine of Paris. Authorized Translation by M. S. Gabriel, M.D. With additions by the Author. Cloth. Pp. 545. Price, $5.00. New York: D. Appleton & Co. 1901.

TRANSACTIONS OF THE WESTERN OPHTHALMOLOGICAL, OTOLOGICAL, LARYNGOLOGICAL AND RHINOLOGICAL ASSOCIATION, Oto-Laryngologic Section, at Its Fifth Annual Meeting, held at Planter's Hotel, St. Louis, April 5, 6 and 7, 1900. Paper. Pp. 48. St. Louis, Mo.: The Laryngoscope. 1900.

STUDIES FROM THE DEPARTMENT OF PATHOLOGY OF THE COLLEGE OF PHYSICIANS AND SURGEONS, Columbia University, N. Y. Vol. II. For the Collegiate Year 1899-1900. Reprints. Paper.

PROCEEDINGS OF THE AMERICAN MEDICO-PSYCHOLOGICAL ASSOCIATION, at the Fifty-sixth Annual Meeting held in Richmond, Va., May 22-25, 1900. Paper. Pp. 353. Published by the American Medico-Psychological Association. 1900.

TRANSACTIONS OF THE NORTH DAKOTA STATE MEDICAL SOCIETY for the Year 1900, and List of Members. Paper. Pp. 66. St. Paul, Minn.: St. Paul Medical Journal. 1900.

THE NINTH ANNUAL REPORT OF THE SHEPPARD AND ENOCH PRATT HOSPITAL FOR MENTAL AND NERVOUS DISEASES. Paper. Pp. 35. Baltimore, Md.: Williams & Wilkins Co.

PROCEEDINGS OF THE PATHOLOGICAL SOCIETY OF PHILADELPHIA. January, 1901. Paper. Published by the Society. 1901.

Queries and Minor Notes.

A HOME FOR PHYSICIANS.

KANSAS CITY, MO., Jan. 8, 1901.

To the Editor:—In reply to G. M. P., in issue of January 5, p. 71, concerning the establishment of a physician's home in some part of the United States, I wish to state that there is such a project, and it is meeting the encouragement of the profession at large; but a few individuals are opposing it, however. Dr. John S. Harris, of Minor Hill, Tenn., has written a few articles in favor of it, and Dr. J. O. Dyer, of Galveston, Tex., is leading the opposition.

Dr. Harris suggests that a fund be raised by subscription, and that the "home" be exclusively for physicians and their wives, who are in destitute circumstances. In my opinion, the movement will be a good one, if properly carried out; but if not conducted in a judicious and professional way, it will only amount to a failure, and a reflection on the medical profession. I beg leave to suggest, inasmuch as said "home" is to be a national affair, and that it is to be conducted under the auspices of the medical profession of America, the following:

1. That its management shall be controlled by the AMERICAN MEDICAL ASSOCIATION.
2. That it shall be called the Sanitarium and Hospital of the American Physicians and Surgeons.
3. That all regular physicians and their wives, in good moral and professional standing, shall be eligible to membership, and that no other class shall be admitted.
4. That a membership fee of $10 be charged all applicants, and that each member be required to pay $5 per annum, as dues, unless satisfactory proof be furnished that he or she is in destitute circumstances.
5. That said sanitarium and hospital shall be located in the most healthful and beautiful spot in America, regardless of all gifts, and other donations offered by any individual, town, state, or corporation; so that the lives of the old veterans may be prolonged, and that their last days may be peacefully and pleasantly spent.

I am opposed to the word "home" in this sense, or to anything which will impart to it the shadow of charity. Let us be courageous, and determined to make it a sanitarium and hospital of the highest order, where members of its association can receive as good medical and surgical aid as the world affords, and enjoy all other necessary comforts of life. This can be accomplished by the proper organization and management. Fraternally, J. L. SHORT, M.D.

SHALL THE CONCEPTION OF INFLAMMATION BE ABANDONED?

CHESTER, PA., Jan. 12, 1901.

To the Editor:—In the leading editorial of THE JOURNAL for December 22, "Shall the Conception of Inflammation be Abandoned?" you refer to Andrew H. Smith's discussion of the subject. Would you kindly inform me how I can obtain the discussion of the subject by this gentleman? Respectfully,

S. B. LUCKIE, D.D.S.

ANS.—Trans. Assoc. of Americ. Phys., 1900, xv, 71-80.

KOPLIK'S SPOTS.

CANEG, TEXAS, Jan. 6, 1901.

To the Editor:—In THE JOURNAL of the 22d ult., in the proceedings of the Cleveland Medical Society, Dr. Emmett L. Holt, of New York City, makes reference to the "Koplik's sign in measles" as a valuable aid in diagnosis. Will you give me in detail what this Koplik's sign is? S. A. F.

ANS.—Koplik's sign consists in the appearance of bluish-white slightly raised spots, about the size of a flaxseed, on the mucous membrane of the inner surface of the cheeks and lips. They vary in number, sometimes only five or six, sometimes fifteen or twenty or more. They are very generally present before the other characteristic signs. These spots are figured in the last edition of Tyson's Practice, opposite p. 105. We would also refer the inquirer to the article by Dr. Koplik on "Roetheln," p. 1195, Volume xxxv, of THE JOURNAL.

RESPONSIBILITY OF MORPHINOMANIACS.

RAVENNA, OHIO, Dec. 29, 1900.

To the Editor:—Can you refer me to anything on the subject of criminal responsibility of those addicted to the morphin habit? For instance, a morphin fiend addicted to the daily use of 45 grains appropriates some property belonging to a friend or forges his name to a paper, but results in no loss to the friend. How far is such a one responsible in the eyes of the law? Would his acts be considered the same as a sane man? If you could refer me to anything on the subject you would confer a great favor on a subscriber. W. G. S.

ANS.—In Clevenger's "Medical Jurisprudence of Insanity" the subject is discussed and a number of legal citations given, showing the status of morphinomaniacs before the law. It is generally recognized in works on mental diseases that opium, like alcohol, produces conditions qualifying if not destroying criminal responsibility.

Change of Address.

Chas. Anderson, Ft. Brown, Tex., to Santa Barbara, Cal.
M. E. Arewine, Melbourne, Ky., to Williamsburg, Ohio.
J. Bruehl, New Ridge Bldg., to Altman Bldg., Kansas City, Mo.
C. Bock, Ft. Wayne, to Indiana School for Feeble-Minded Youths, Ft. Worth, Ind.
A. H. Barr, New Orleans, La., to Storkville, Miss.
L. P. H. Bahrenburg, New York City, to U. S. Marine-Hospital Service, Honolulu, H. I.
C. S. Chamberlin, Kinsman, to P. O. Box 243, Cincinnati, Ohio.
W. J. Chenowith, Chico, Cal., to Decatur, Ill.
H. Cushman, 216 Ogden Ave., to 545 Van Buren St., Chicago.
E. Cross, Del Rio, to 231 Ave. C, San Antonio, Tex.
W. C. Cole, Omaha, Neb., to 3614 Ave. C, Council Bluffs, Iowa.
U. A. D. Collelmo, Watonga, to Weatherford, O. T.
F. H. DeVaux, Des Moines, Iowa, to Omaha Bldg., Chicago.
W. C. Davis, Chicago, to 2104 W. Washington St., Indianapolis, Ind.
W. Durrett, Ralston, to Pawnee, O. T.
H. C. Dunavant, Little Rock, to Osceola, Ark.
J. V. Davis, College Park, to Grantville, Ga.
J. F. Dunn, 614 Walnut, to 701 Walnut St., Milwaukee, Wis.
G. S. Darby, 79 Seeley Ave., to 653 W. Monroe St., Chicago.
A. D. Epps, 18 Trumbo, to 89 Beaufain St., Charleston, S. C.
J. W. Earel, Cambridge, Neb., to 606 W. Adams St., Chicago.
T. M. Edwards, Daisy, to Manassas, Ga.
W. H. Faulds, Luzerne, to Kingston, Pa.
C. H. Frizelle, Pontiac, to 403 E. Main St., Streator, Ill.
W. H. Forwood, San Francisco, Cal., to 46 N. 40th St., Philadelphia, Pa.
C. F. Gilmore, Chesterland, to Lorain Blk., Lorain, Ohio.
W. H. Gobrecht, Myerstown, W. Va., to 905 M St., N. W., Washington, D. C.
S. C. Graves, 97 Ottawa St., to Pythian Temple, Grand Rapids, Mich.
S. E. Greenfield, Atchison, to Hiawatha, Kan.
Mary D. Gayden, New Orleans, to Glencoe, La.
C. E. Hood, Cavalier, to Drayton, N. D.
J. Holland, Pahala, Kan, Kapoho, Puna, Hawaii, H. I.
A. Hoeltze, 322, to 1542 Linn St., Cincinnati, Ohio.
F. N. Hayes, Crowley, to Iota, La.
B. M. Hopkinson, 1435, to 1423 Bolton St., Baltimore, Md.
S. C. Hopkins, Norcross, to 95 W. Baker St., Atlanta, Ga.
J. S. Hall, 1013 N. J. St., to 3127 W. Washington St., Indianapolis, Ind.
J. E. Heraty, 614, to 701 Walnut St., Milwaukee, Wis.
J. R. Irwin, 15 E. 7th, to 401 N. Tryon St., Charlotte, N. C.
C. Jaeger, 1705 Champa St., to 509 California Bldg., Denver, Colo.
W. J. Jolly, McMinnville, Tenn., to Oklahoma City, O. T.
M. Johnson, 1110 W. 30th St., to 345 Westlake Ave., Los Angeles, Cal.
G. D. Kahlo, 1221, to 1321 N. Delaware St., Indianapolis, Ind.
W. E. Lamerton, Wyoming, Iowa, to 502 W. Van Buren St., Chicago.
J. A. Lockard, Toledo, to 59 S. Mulberry St., Mansfield, Ohio.
A. C. Lippincott, New York City, to Columbiaville, N. Y.
J. T. Mills, Waleska, to Sharptop, Ga.

Smith McMullin, Evanston, Wyo., to Gardnersville, Nev.
Jas. Monroe, Custer, to Nampa, Idaho.
W. E. Maxwell, Portland, Ore., to Kellyton, Ala.
J. W. Macfarlane, 3617 Butler, to 200 9th St., Pittsburg, Pa.
H. McGrew, Silverton, to Pleasant Ridge, Ohio.
P. C. Manley, Mayfield, to 1418 Pittston Ave., Scranton, Pa.
W. H. Moore, 434 Atkin St., to 326 W. Park Ave., Knoxville, Tenn.
H. R. Martin, 293 S. Robey St., to 871 Jackson Boul., Chicago.
J. W. Montgomery, Toledo, to Birds, Ill.
R. E. Mason, Gastonia, N. C., to Seneca, S. C.
W. A. Montgomery, Omaha, Neb., to 334 Dearborn St., Chicago.
R. A. Noble, 2259 Calumet Ave., to Chicago Hospital, Chicago.
R. F. Nomocks, Vossburg, to Poplarville, Miss.
J. G. Orton, Binghampton, N. Y., to Dayton, Fla.
W. E. O'Quinn, Las Cruces, to Torpedo Mining Co., Organ, N. M.
J. W. Price, Boonville, Miss., to Helena, Ark.
J. T. Rogers, Excelsior, to Statesboro, Ga.
H. L. Rine, 120 Elm, to 272 N. 3rd St., Newark, Ohio.
L. F. Richardson, Fairfax, to Terrill, Iowa.
S. M. B. Smith, Wausau, to Crandon, Wis.
J. M. Strayhorn, Bartlett, to over First Nat. Bank, Waco, Tex.
Chas. Schaper, 1304 N. 8th St., to 722 Michigan Ave., Sheboygan, Wis.
Geo. H. Stover, California Bldg., to Opera House Blk., Denver, Colo.
I. S. Stone, 3044 14th St., N. W., to 1449 R. I. Ave., Washington, D. C.
G. B. Somers, 1034 Mission, to 2416 Webster St., San Francisco, Cal.
L. W. Shannon, Granada, Kan., to 398 Wells St., Chicago.
Jessie B. Scott, 1215 25th St., Des Moines, Iowa, to 2405 N St., South Omaha, Neb.
J. N. Shaff, Cisco, to Alton, Ill.
A. F. Stotts, Soldier, Pa., to 522 N. 1st St., Marshalltown, Iowa.
H. M. Trankle, 509, to 663 W. Monroe St., Chicago.
J. E. Torrence, Oxford, to Presbyterian Hospital, Cincinnati, O.
The King-Scherer Co., 17 Park Pl., to 225-233 Fourth Ave., New York City.
J. E. Thompson, Peckville, to La Grande St., Pittston, Pa.
A. V. Thompson, Snowville, N. H., to Woodfords, Me.
G. H. Willis, Galien, to New Troy, Mich.
W. S. Watson, Fishkill-on-the-Hudson, N. Y., to Box 362 Salt Lake City, Utah.
M. A. Walker, Melrose, to Butte, Mont.
H. C. Wood, Irvington, to Vienna, Ga.
W. S. Whitwell, Fishkill-on-the-Hudson, to 30 W 11th St., New York City.
W. C. Welburn, 420 Woodland, to 501 Russell St., Nashville, Tenn.
C. C. Young, 348 Ogden Ave., to 231 Ashland Boul., Chicago.

New Patents.

Patents of interest to physicians, Jan. 1 and 15:

665,304. Vaginal irrigator. Moriz Bauer, Vienna, Austria-Hungary.
664,923. Atomizing apparatus. Robert L. Benson, Chicago, Ill.
664,840. Syringe. Byron J. Douds, Canton, Ohio.
665,084. Nasal inhaler. Marshall B. Gardner, Aurora, Ill.
665,243. Medical bed. Adolfo Luria, Chicago, Ill.
665,258. Liquid pasteurizer. Lars C. Nielsen and P. V. F. Petersen, Copenhagen, Denmark.
664,893. Spraying nozzle. Peter C. Peterson, Ottawa, Kan.
665,371. Syringe. Walter H. Pumphrey, New York City.
665,771. Log-holder for use in lithotomy. Willis W. Dean, Sioux City, Iowa.
665,617. Making potassium hydroxid. Heinrich Precht, Neustassfurt, Germany.
665,468. Chemical apparatus. Ralph C. Robinson, Boston, Mass.
665,756. Medicinal bath cabinet. Fortunee R. Ryan, Memphis, Tenn.
665,963. Electrolyzing soluble salts. A. J. O. Chalandre, L. J. B. A. Colas, Paris, and C. J. Gerard, Seveux, France.
665,879. Piperazin quinate and making same. Wilhelm Connstein, Charlottenberg, Germany.
666,135. Making cyanogen bromid. Carl Goepner and W. Witter, Hamburg, Germany.
666,221. Apparatus for decomposing solutions. Daniel N. Hathorne and H. E. Hobson, Rumford Falls, Maine.
666,094. Clinical thermometer. James J. Hicks, London, England.
666,210. Disinfecting apparatus. Michael Sheridan, New York City.
33,913. Design, ice or hot water bag. Christian W. Meinecke, Jersey City, N. J.

The Public Service.

Army Changes.

Movements of Army Medical Officers under orders from the Adjutant-General's Office, Washington, D. C., Jan. 10 to 16, 1901, inclusive:

George W. Adair, major and surgeon, U. S. A., member of a board at Fort Sheridan, Ill., to examine officers for promotion.

Ira A. Allen, acting asst.-surgeon, former orders amended so as to direct him to proceed from New York City, to Hot Springs, Ark., for temporary duty at the Army and Navy General Hospital at that place.

John M. Banister, major and surgeon, U. S. A., member of a board at West Point, N. Y., to examine officers for promotion.

Alfred E. Bradley, captain and asst.-surgeon, U. S. A., member of a promotion board at St. Paul, Minn.

William H. Brooks, acting asst.-surgeon, leave of absence granted.

Charles B. Byrne, major and surgeon, U. S. A., member of a promotion board at San Antonio, Tex.

Weston P. Chamberlain, lieutenant and asst.-surgeon, U. S. A., leave of absence granted.

Peter J. A. Cleary, lieut.-col., deputy surgeon-general, U. S. A., member of a promotion board at San Antonio, Tex.

Calvin DeWitt, lieut.-col., deputy surgeon-general, U. S. A., member of a promotion board at West Point, N. Y.

Franklin M. Kemp, lieutenant and asst.-surgeon, U. S. A., member of a promotion board at West Point, N. Y.

George J. Newgarden, captain and asst.-surgeon, U. S. A., sick leave of absence extended.

Maxwell S. Simpson, captain and asst.-surgeon, Philippine Cavalry, Vols., having tendered his resignation, is honorably discharged from the service of the United States, to take effect Jan. 31, 1901.

Samuel S. Turner, acting asst.-surgeon, member of a promotion board at Fort Sheridan, Ill.

Sanford H. Wadhams, lieutenant and asst.-surgeon, U. S. A., sick leave of absence from the Department of Porto Rico extended.

In addition to the above the following acting asst.-surgeons were directed to proceed from the places designated to San Francisco, Cal., for assignment to duty with troops en route to the Philippine Islands, and for subsequent service in the Division of the Philippines: James Bourke, Chicago; George J. Fanning, Sacaton, Ariz.; Almon P. Goff, Caton, N. Y.; Charles E. Jackson, Canal Fulton, Ohio; Joseph W. Love, Springfield, Mo.; Thomas C. McSwain, Bingham, S. C.; Robert C. Rogers, Bloomington, Ind.; James W. Smith, Chicago, and George B. Tuttle, St. Louis, Mo.

Navy Changes.

Changes in the Medical Corps of the Navy for the week ending Jan. 19, 1901:

Asst.-Surgeon J. B. Dennis, to delay reporting for duty at Naval Academy until Jan. 21.

Asst.-Surgeon J. C. Pryor, ordered to duty at Naval Hospital, New York.

Asst.-Surgeon R. B. Williams, detached from the navy yard, New York, and ordered to the navy yard, Pensacola.

Asst.-Surgeon T. M. Lippitt, detached from the Naval Hospital, Yokohama, Japan, and ordered to Naval Hospital, Mare Island, via *Solace*.

Asst.-Surgeon B. L. Wright, detached from the Naval Hospital, Yokohama, Japan, and ordered to Naval Hospital, Mare Island, via *Solace*.

Marine-Hospital Changes.

Official list of the changes of station and duties of commissioned and non-commissioned officers of the U. S. Marine-Hospital Service for the seven days ended Jan. 17, 1901:

Surgeon H. W. Sawtelle, leave of absence for thirty days granted by bureau letter of Dec. 18, 1900, revoked.

Surgeon F. W. Mead, leave of absence for sixty days from Jan. 21.

Surgeon A. H. Glennan, detailed to represent the service at meeting of Third Pan-American Congress, to be held at Havana, Cuba, Feb. 4-8.

Surgeon W. J. Pettus, granted leave of absence for two months from Feb. 5.

P. A. Surgeon J. A. Nydegger, granted leave of absence for thirty days.

P. A. Surgeon A. R. Thomas, to proceed to Shields, England, for special temporary duty. Relieved from duty at Glasgow, Scotland, and assigned to duty in the office of the U. S. Consul-General at London, England.

Asst.-Surgeon C. H. Lavinder, to proceed to Vineyard Haven, Mass., and assume temporary charge of the service during absence of Surgeon F. W. Mead.

Asst.-Surgeon John McMullen, granted leave of absence for twenty-one days from Jan. 21.

A. A. Surgeon R. C. Craig, granted leave of absence for seven days.

Health Reports.

The following cases of smallpox, yellow fever, cholera and plague have been reported to the Surgeon-General, U. S. Marine-Hospital Service, during the week ended Jan. 19, 1901:

SMALLPOX—UNITED STATES.

California: Oakland, Dec. 29-Jan. 5, 1 case.
Connecticut: Bridgeport, Jan. 7, 3 cases.
Illinois: Cairo, Jan. 5, 8 cases; Chicago, Jan. 5-12, 19 cases.
Kansas: Wichita, Jan. 5-12, 6 cases.
Maryland: Baltimore, Jan. 5-12, 1 case.
Massachusetts: Springfield, Jan. 5-12, 1 case.
Minnesota: Dec. 29-Jan. 5, Minneapolis, 1 case; Winona, 30 cases.
New Hampshire: Manchester, Jan. 5-12, 21 cases.
New York: New York, Jan. 5-12, 17 cases, 3 deaths.
Ohio: Jan. 5-12, Ashtabula, 4 cases; Cleveland, 51 cases.
Pennsylvania: Philadelphia, Jan. 5-12, 1 death.
Tennessee: Jan. 5-12, Memphis, 8 cases; Nashville, 5 cases.
West Virginia: Wheeling, Jan. 5-12, 1 case.

SMALLPOX—FOREIGN.

Austria: Prague, Dec. 22-29, 12 cases.
Canada: New Brunswick, Port Elgin and Cape Tarmentine, Dec. 28, 40 cases.
England: Leeds, Dec. 29-Jan. 5, 1 case; London, Dec. 22-29, 1 case.
India: Bombay, Dec. 4-18, 3 deaths; Calcutta, Dec. 1-15, 81 deaths; Karachi, Dec. 2-16, 16 cases, 2 deaths; Madras, Dec. 8-14, 1 death.
Mexico: Vera Cruz, Dec. 29-Jan. 5, 4 cases, 2 deaths.
Russia: St. Petersburg, Dec. 15-22, 5 cases, 1 death.

YELLOW FEVER.

Cuba: Dec. 29-Jan 5, Havana, 5 deaths; Matanzas, 1 case.
Mexico: Vera Cruz, Dec. 29-Jan. 5, 1 case.

CHOLERA.

India: Bombay, Dec. 4-18, 6 deaths; Calcutta, Dec. 1-15, 56 deaths; Madras, Dec. 8-14, 1 death.

PLAGUE.

China: Hongkong, Nov. 24-Dec. 1, 2 deaths.
India: Bombay, Dec. 4-18, 178 deaths; Calcutta, Dec. 1-15, 39 deaths.
Turkey: Constantinople, Jan. 11, on steamship *Berria*, from Poti.